NOS/VE 1.7.1 L803 INSTALLATION HANDBOOK

SMD134138

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Chapter 1
Introduction

The NOS/VE 1.7.1 L803 Installation Handbook (IHB) contains the information required to perform the installation of NOS/VE and its software products. Detailed steps for each of the various types of installations are provided. Special product configuration steps are also included. Additional product information can be found in the NOS/VE 1.7.1 L803 Software Release Bulletin (SRB). Refer to appendix B of this handbook for a complete list of products that are installed using the instructions in this handbook. Other products, referred to as application products, can also be installed on NOS/VE. These products and their installation instructions are not included in this handbook. Refer to the software release bulletins accompanying specific applications for information pertaining to the installation of application products.

The IHB is also available online. The file name is $SYSTEM.DOCUMENTATION.INSTALLATION_HANDBOOK.

Organization

This handbook contains information to install NOS/VE software products. Several types of installations are possible and are documented in this handbook. The following chapters and appendices are present in this handbook:

Chapter 1, Introduction, presents installation concepts and the various forms of installations possible for a NOS/VE system. The chapter contains a list of Control Data reference manuals that are used during the installation process and required installation preparation steps.

Chapter 2, Initial Installation, describes the process of installing NOS/VE for the first time. All steps necessary to install NOS/VE and its products and to make them ready for productive use are described in the chapter. Initial installation instructions are described for NOS/VE standalone and dual state installations. The chapter applies to all mainframe types except the CYBER 93x.

Chapter 3, Special Product Initial Installation Instructions, contains additional installation information and instructions for certain NOS/VE products being installed for the first time. You must perform the steps in the chapter only for those products indicated and for which you are installing.

Chapter 4, Dual State Installation, describes the steps required to install NOS/VE in a dual state environment. The chapter discusses the steps pertinent to the NOS/VE portion of the dual state system. The installation of NOS or NOS/BE is described in manuals referenced in the chapter. If you are installing a dual state system you will be instructed to perform the steps in chapter 5 at the appropriate time in either chapter 2 or 3.

Chapter 5, CYBER 93x Initial Installation, describes the steps to be performed on a CYBER 93x upon receiving the system from the factory. NOS/VE is factory installed on the CYBER 93x using most of the steps described in the Initial Installation chapter of the IHB. The chapter describes the additional steps you must perform to make the system available for production, such as site tailoring, network configuration and definition, and creation of user validations.

Chapter 6, CYBER 2000 Initial Installation, describes the first few steps in the installation process for the CYBER 2000. You will later be referred back to chapter 2 to complete your initial installation of a CYBER 2000.

Chapter 7, Upgrade Installation, describes the process of upgrading NOS/VE from a previous level to the new release level. The chapter applies to upgrades on all CYBER mainframes, including the CYBER 93x.

Chapter 8, Special Product Upgrade Installation Instructions, contains special installation information and instructions for certain NOS/VE products being upgraded from a previous level. You must perform the steps in the chapter only for those products indicated and for which you are upgrading.

Chapter 9, Component Order Installation, describes the process to install one or more NOS/VE products that were ordered and received separately from the operating system. The chapter applies to products installed anytime after an initial or upgrade installation is complete.

Chapter 10, Special Product Component Installation Instructions, contains special installation information and instructions for certain NOS/VE products being installed for the first time, but not as part of a complete NOS/VE initial installation. You must perform the steps in the chapter only for those products indicated and for which you are installing.

Chapter 11, Batch Corrective Update (BCU) Installation, contains installation information and instructions for corrections called BCUs to NOS/VE products.

Chapter 12, Quick Corrective Update (QCU) Installation, contains installation information and instructions for corrections called QCUs to the NOS/VE subproduct NOSVE_MAINTENANCE.

Appendix A, FTAM Interoperability with Foreign Vendors, contains information on configuring CDCNET and NOS/VE such that OSI communications can be established with foreign vendors.

Appendix B, Product Table, contains a list of NOS/VE 1.7.1 L803 products whose installation processes are described in this handbook. In addition, current disk sizes and changes from the previous two releases are indicated for each product.

Appendix C, Configuration Management, contains a chart indicating the various levels of software Control Data has certified with each mainframe type.

Appendix D, Support Information, contains information concerning support windows for standalone and dual state releases.

A list of keywords follows the last appendix.

Installation Overview

The term installation refers to an initial or upgrade establishment of NOS/VE software for general purpose use. An initial installation of NOS/VE refers to the first time NOS/VE is installed on a mainframe. An upgrade installation of NOS/VE is a change to the operating system itself or a change to the operating system's standard or optional products. A component order installation refers to the installation of one or more NOS/VE products ordered and received separately anytime after an initial or upgrade installation has been completed.

To install NOS/VE, you should first read the chapter in this handbook pertaining to the type of installation you are performing. If your mainframe will operate in dual state mode, you should read chapter 4 in addition to the chapter describing the type of NOS/VE installation you will be performing.

To correct a critical system problem after a release of NOS/VE, Control Data produces a Batch Corrective Update (BCU). The instructions for installing a BCU are provided in chapter 11 of this handbook.

Manuals Referenced in the IHB

The following manuals are referenced throughout this handbook. You are directed to them for more information regarding a particular step or process. You may want to have them available during your installation. You are strongly encouraged to have the manuals that are marked with an asterisk (*).

- Archive/VE Option for 7990-NOS Reference manual (60000445)
- Cartridge System/VE for 5744 manual (60463928)
- Cartridge System/VE for 7992 manual (60463927)
- CDCNET Batch Device User guide (60463863)
- CDCNET Commands Reference manual (60000414)
- *CDCNET Configuration guide (60461550)
- Control Data Software Support manual (60494500)
- CYBER 930 Guide to Operations manual (60469560)
- Desktop/VE Host Utilities manual (60463918)
- DM System Administrator's Reference manual (60487902)
- IM/Control for NOS/VE Usage manual (60488913)
- IM/DM Data Administration manual (60489014)
- Mail/VE Version 2 Administration manual (60464515)
- Network Transfer Facility Usage manual (60000628)
- NOS/BE Operator's guide (60493900)
- NOS/BE Preparation guide (SMD132522)
- NOS Version 2 Analysis handbook (60459300)
- NOS Version 2 Installation handbook (60459320)
- NOS Version 2 Operations handbook (60459310)
- NOS/VE Accounting Analysis System manual (60463923)
- NOS/VE Accounting and Validation Utilities for Dual State manual (60458910)
- NOS/VE File Archiving manual (60463944)
- NOS/VE File Server for STORNET and ESM-II manual (60000190)
- NOS/VE LCN Configuration and Network Management manual (60463917)
- NOS/VE Network Management manual (60463916)
- NOS/VE Object Code Management manual (60464413)
- *NOS/VE Operations manual (60463914)
- NOS/VE Optical Storage System manual (60463926)
- NOS/VE Removable Media Management System manual (60463947)
- *NOS/VE System Performance and Maintenance Manual, Volume 1 (60463915)
- *NOS/VE System Performance and Maintenance Manual, Volume 2 (60463925)
- NOS/VE System Release Bulletin (SRB)
- NOS/VE Terminal Definition manual (60464016)
- *NOS/VE User Validation manual (60464513)
- ORACLE for NOS/VE Installation and User's guide (60488014)
- Software Release Bulletin for Distributed File Server Version 1.0.3 (SMD133110)
- UNIX Site Administration guide for CYBER 2000
- You should also obtain a copy of the CIP manual specific to your mainframe type.

Information on ordering any of the latest publications and microfiche is provided in appendix C of the NOS/VE 1.7.1 L803 SRB.

Preparing for an Installation

Before you begin any NOS/VE installation process, you should:

- Read all installation bulletins on SOLVER for NOS/VE 1.7.1 L803.
- Familiarize yourself with the installation utilities. Refer to the Installation Software chapter of the NOS/VE System Performance and Maintenance Manual, Volume 2 (60463925) for more information.
- Read the NOS/VE 1.7.1 L803 Software Release Bulletin (SRB). The SRB contains general product information, including feature descriptions, notes and cautions, significant problems, etc. In particular, it is recommended that you read the chapters titled Deadstart and Hardware Considerations, Operations, System Performance and Maintenance, and any chapters applicable to the products you are installing.
- Check that all of your hardware is at the proper Field Change Announcement (FCA) levels indicated in appendix C of this handbook.

The first task is described in the following section.

SOLVER

Installation Bulletins

Installation Bulletins are issued to communicate information that is discovered after the release has been forwarded to customers. You can access Installation Bulletins through SOLVER. Refer to the following section for information on reporting a problem and using SOLVER.

Reporting a Problem

SOLVER is an interactive program that allows you to access the Control Data Programming Systems Report (PSR) database. By using SOLVER, you can:

- List installation bulletins associated with this and other operating systems and levels.
- Report software problems to Control Data.
- Check the status of problem reports.
- Search for duplicate problem reports submitted by other customers.

If a solution to your problem cannot be found by searching the PSR database and checking Installation Bulletins, you should write a PSR describing the problem. The SOLVER report function provides four ways to report a problem:

1. Write a PSR.
2. Place a "me-too" flag on an existing PSR.
3. Write a comment on CYBER software product documentation.
4. Request Software Enhancement of a product to better meet the needs of your site.

The report function is menu-driven and provides online help at every point.

You can access SOLVER through direct dial or Telenet lines. Contact your local Control Data Professional Services office for complete access information. For more information on access to SOLVER, refer to the Control Data Software Support manual (60494500).

Support Operations Customer Support Hotline

Support Operations maintains a hotline to assist you in the use of our products. If you need help not provided by the documentation or find that a product does not perform as described, use one of the following methods to notify us:

Control Data Systems, Inc.
Support Operations - ARH287
4201 Lexington Avenue North
Arden Hills, MN 55126-6918
USA

Telephone: 800-345-6628 (USA and Canada)
612-482-3434 (all other countries)

Support Operations can also be contacted by CDCMAIL or through EMAIL. EMAIL addresses can be reached by those who have INTERNET access or access to MAIL/VE on the Minneapolis Data Center machine, DSB. The following are the allowed CDCMAIL/EMAIL addresses to be used for additional help for a particular product or problem.

CDCMAIL	email	description
ARHCSS,APPLIC	arhcss-applications@css.cdc.com	non-ICEM appl.
ARHCSS,C VE	arhcss-c@css.cdc.com	CVE, CV2
ARHCSS,CDCNET	arhcss-cdcnet@css.cdc.com	CDCNET
ARHCSS,CPS	arhcss-cps@css.cdc.com	Compilers & prods.
ARHCSS,EDL	arhcss-edl@css.cdc.com	EDL
ARHCSS,EPIX	arhcss-epix@css.cdc.com	EP/IX & C
ARHCSS,GENERAL	arhcss@css.cdc.com	misc.
ARHCSS,ICEM	arhcss-icem@css.cdc.com	ICEM except EDL
ARHCSS,NOS	arhcss-nos@css.cdc.com	NOS
ARHCSS,NOS BE	arhcss-be@css.cdc.com	NOS/BE
ARHCSS,NOS VE	arhcss-ve@css.cdc.com	NOS/VE
ARHCSS,RHF	arhcss-rhf@css.cdc.com	RHF
ARHCSS,SOLVER	arhcss-solver@css.cdc.com	SOLVER
ARHCSS,TCIX	arhcss-tcix@css.cdc.com	TC/IX
ARHCSS,UNIXNET	arhcss-unixnetworks@css.cdc.com	EP/IX,IRIX
networks		
ARHCSS,VX VE	arhcss-vxve@css.cdc.com	VX/VE
ARHCSS,910	arhcss-910@css.cdc.com	910/920 IRIX & C
ARHCSS,PSR	arhcss-psr@css.cdc.com	PSR
ARHCSS,SUPPORTMG	arhcss-supportmgr	Support Oper. Mgr

Chapter 2
Initial Installation

This chapter describes the initial installation of NOS/VE 1.7.1 L803 for all CYBER mainframes except the CYBER 93x and the CYBER 2000. Instructions for initial installation of NOS/VE on a CYBER 93x are contained in chapter 5. Instructions for initial installation of NOS/VE on a CYBER 2000 are contained in chapter 6. You will be referred back to this chapter after the first few installation steps for the CYBER 2000 are completed.

The CIP L803 SRB contains information specific to this release of CIP. NOS/VE configuration information relevant to the CIP device can be found in the Physical Configuration chapter of the NOS/VE System Performance and Maintenance Manual, Volume 2 (60463925), hereafter referred to as SPMM/Vol2. The NOS/VE System Performance and Maintenance Manual, Volume 1 (60463915) is referred to as SPMM/Vol1.

If your mainframe will operate in dual state mode, it is assumed that a compatible version of the NOS or NOS/BE operating system has already been installed. Compatible versions are shown in appendices C and D of this manual. Only those combinations shown have been certified to be compatible.

The commands you enter throughout the installation process must be entered either at the NOS/VE system console or from a terminal.

The initial installation process assumes that the mainframe being installed is not connected to an existing NOS/VE network. If it is, no user access to this mainframe from other mainframes should be allowed until the installation is complete. In a dual state environment, no access to NOS/VE by NOS or NOS/BE users should be allowed until the installation is complete.

The installation of the NOS/VE network is optional in a dual state environment because the configuration terminal can be connected to NAM/CCP or NAM/CDCNET (for NOS) or INTERCOM 5 (for NOS/BE). The NOS/VE network must be installed for a standalone NOS/VE system.

Information in this chapter for installing the NOS/VE network is limited to loading the device interfaces (DIs) required to support the configuration terminal and installing the NOS/VE timesharing application. Refer to the CDCNET Configuration guide (60461550) and the CDCNET Batch Device User guide (60463863) for installation information to complete NOS/VE network and printer setup.

Refer to the SPMM/Vol2 and the System Performance and Maintenance chapter in the NOS/VE 1.7.1 L803 SRB for information about configuring your system for greatest availability.

Installation Summary

The following table provides a summary of the installation process described in this chapter. It will be helpful for you to be familiar with the SPMM/Vol2 before proceeding to step 1.

Steps	Purpose	Before you start, you should
1 through 9	Install the operating system, the initial set of NOS/VE software, create your default family and configure a network terminal.	Fill in the checklist on the next page with the information for your site.
10 and 11	Create a new deadstart file that defines the physical configuration and the set of system core commands.	Use the Physical Configuration Utility chapter in the SPMM/Vol2 for hardware naming conventions, defining elements, and using EDIT_PHYSICAL_CONFIGURATION. Map out your complete physical configuration on paper. Read the Deadstart File chapter in the SPMM/Vol2 for information about creating deadstart catalogs and a deadstart tape.
12 through 14	Install the physical configuration and establish the system deadstart disk.	
15 through 19	Install remaining product tapes and perform special steps for applicable products.	

Installation Information Checklist

Boot Display Information (Refer to step 2)

	Deadstart Device (Tape)	System Device (Disk)
DCFILE Name		_____
IOU number	_____	_____
Channel number	_____	_____
Controller model number	$_____	$_____
Storage device model number	$_____	$_____
Equipment number	_____	_____
Unit number	_____	_____

System Core Information (Refer to step 3)

Volume Name of the System Device	_____
Packing List Name	_____
External VSN of the Installation Tape	_____
Tape Type	_____

PCU Information (Refer to step 4)

Host-connected CDCNET DI	
Element name	_____
Channel number	_____
Serial Number	_____
Element Identifier from list below	$_____

$2620_210	MTI on 60Hz power supply
$2620_211	MTI on 50Hz power supply
$2621_210	MDI on 60Hz power supply
$2621_211	MDI on 50Hz power supply

Create the Default Family (Refer to step 6)

Family for User Jobs	
NOS/VE Family name	_____
NOS/VE Family administrator's user name	_____
NOS/VE Family administrator's password	_____
NOS/VE Family permanent file set name	_____

Define the Network (Refer to step 7)		
System identifiers for CDCNET device interfaces		
MDI		_____
MTI		_____
TDI		_____
LIM and Port for Async Terminal	_____	_____
LIM and Port for Async Printer	_____	_____
Host network identifier		_____
Timesharing titles	_____	_____

Dual State Systems (Refer to steps 11 and 13 and chapter 4.)	
NVExxxx procedures	Procedure Name
Deadstart with pause	_____
Deadstart without pause	_____

Step 1: Initiate NOS/VE Deadstart

CYBER 2000 installation instructions begin in chapter 6. CYBER 930x installation instructions are in chapter 5. Dual state installation instructions begin in chapter 4.

NOTE

Installation instructions for dual state and for the CYBER 2000 will instruct you to return to this chapter.

For all other initial installations, begin here.

Instructions in this chapter assume that CIP L803 has been properly installed. CIP installation instructions are contained in the CIP manual specific to your mainframe.

After CIP L803 has been installed properly, you can install the NOS/VE 1.7.1 L803 boot components by performing the following procedure. These steps summarize the NOS/VE boot installation process for the different consoles. Mount the NOS/VE 1.7.1 L803 deadstart tape and then follow the column that pertains to your NOS/VE console type at your site.

CC545, CC634B, or CC598B/E	CC598A/D	CC595 or CC599
1. - If your console has a deadstart button, press the button labeled DEADSTART BUTTON. - If your console does not have a deadstart button, press the CTRL and G keys simultaneously, then press the CTRL and R keys simultaneously. If your mainframe is a CYBER 815 or 825, press the S and then the NEXT key also. 2. If the DEADSTART OPTIONS menu appears, enter: S	1. Bring up the CONSOLE MAIN MENU by pressing the CTRL and F2 keys simultaneously. If the CONSOLE MAIN MENU does not appear, press the CTRL, ALT, and DEL keys simultaneously. The Control Data logo appears. After 10 seconds, the CONSOLE MAIN MENU appears. Note the CIP partition displayed at the bottom of the menu. (The usual partition is partition 1.)	1. Bring up the CONSOLE MAIN MENU by pressing the ESC key. If the CONSOLE MAIN MENU does not appear, press the ALT and F2 keys simultaneously. 2. Select the MAINTENANCE menu by pressing: M 3. From the MAINTENANCE menu, select the UTILITIES menu by pressing: U

CC545, CC634B, or CC598B/E	CC598A/D	CC595 or CC599
3. From the INITIAL OPTIONS menu, select the UTILITIES menu by pressing: U 4. From the UTILITIES menu, select OS BOOT INSTALL by pressing: V Supply the information requested for the NOS/VE deadstart tape. NOS/VE boot modules are installed onto the CIP device from which you performed the current deadstart. 5. When the UTILITIES menu reappears, initialize the mainframe by pressing: I 6. The system displays the INITIAL OPTIONS menu again. From the INITIAL OPTIONS menu, select the OS LOAD WITH INTERVENTION menu by pressing: O The system displays the OS LOAD WITH INTERVENTION screen.	2. If the CIP partition must be changed, perform the following steps, otherwise, skip to the next step in this column. - Press M to select the MAINTENANCE OPTIONS menu. - From the MAINTENANCE OPTIONS menu, press S to select the SELECT CIP PARTITION display. - From the SELECT CIP PARTITION, type 1 or 2 to select the correct CIP partition. - Repeat step 1 in this column to return to the CONSOLE MAIN MENU. 3. From the CONSOLE MAIN MENU, select the MAINTENANCE OPTIONS menu by pressing: M 4. From the MAINTENANCE OPTIONS menu, select the INSTALL/UPDATE CIP option by pressing: I A warning message will appear. Press RETURN to proceed, then reply to tape system queries that follow. The CIP INSTALLATION menu appears.	4. From the UTILITIES menu, select OS BOOT INSTALLATION by pressing: O The system will ask you to verify that the deadstart tape is mounted on the device specified by the INSTALL FROM parameter of the CRITICAL DEVICE display (set when CIP is installed). Mount your deadstart tape here and press RETURN. 5. When the OS boot installation is complete, return to the UTILITIES menu by pressing the ALT and F2 keys simultaneously. 6. From the UTILITIES menu, return to the MAINTENANCE menu by pressing: ESC 7. From the MAINTENANCE menu, return to the CONSOLE MAIN MENU by pressing: ESC

CC545, CC634B, or CC598B/E	CC598A/D	CC595 or CC599
7. Note the OS LOAD WITH INTERVENTION screen. If the subtitle NOS OR NOS/BE DEADSTART is present, press O (the letter O) to toggle the screen. No subtitle is present for a NOS/VE deadstart. 8. From the OS LOAD WITH INTERVENTION screen, select CONTINUE OS LOAD by pressing: A 9. Some CYBER mainframe models may prompt for the date and time. Enter this information if requested to do so. Enter the time in the 24 hour format (hours.minutes.seconds) For example: 22.30.00 Enter the date in the format (month/day/year) For example: 01/31/91	5. From the CIP INSTALLATION menu, select MANUAL INSTALLATION by pressing: M 6. From the MANUAL INSTALLATION menu, select REPLACE COMMON DISK AREA by pressing: D 7. From the REPLACE COMMON DISK AREA menu,select OS BOOTS by pressing: G The system will prompt you to enter the tape type of the tape that contains the boot. Select O.S. DEADSTART TAPE by pressing: O The NOS/VE boot programs are now installed in the selected CIP partition. During the file transfer, names of the programs being installed are displayed. Upon completion, the REPLACE COMMON DISK AREA is displayed again.	8. When the CONSOLE MAIN MENU appears, select OS LOAD WITH INTERVENTION by pressing: L This initiates the deadstart process. The boot display now appears.

CC545, CC634B, or CC598B/E	CC598A/D	CC595 or CC599
	8. Bring up the CONSOLE MAIN MENU by pressing the CTRL and F2 keys simultaneously. 9. From the CONSOLE MAIN MENU, select the INITIAL OPTIONS menu by pressing: S 10. - If the deadstart program is correctly set, press RETURN to select the default option, OS LOAD - If changes to the deadstart program must be made, press O (the letter O) to select OS LOAD WITH INTERVENTION. Operator intervention also allows mainframe component reconfiguration. For specific information regarding operator intervention options, refer to subsequent displays for deadstart options.	

Step 2: Set the Deadstart Parameters

Information entered in the boot display is saved across deadstarts. Define the boot display fields as follows:

Field	Entry
1	Specify TAPE.
2	Specify TRUE.
3	Specify DCF01.
4 through 8	Describe the deadstart tape device.
9 through 13	Describe the system disk device.

A parameter value may be entered in octal or hexadecimal by including the base in parentheses. If you do not specify a base, decimal is the base assumed.

See the Physical Configuration Utility chapter in the SPMM/Vol2 about defining values for a particular device.

After you enter the display information in this manner, press the NEXT key to continue with the deadstart.

The following page shows a sample deadstart boot display.

```
                                NOS/VE

      Copyright Control Data 1983, 1992

          Deadstart and System Device Configuration Selections
1. OS Location.............................. Tape
2. Deadstart pause for operator input ... True
3. DCFILE name ............................ DCF01

Deadstart Device                          System Device

4. IOU ..................... 0(10)        9. IOU ..................... 0(10)
5. Channel ................. CH26         10. Channel ................. CH2
6. Controller and ......... $7021_32     11. Controller and ......... $7155_12
     Storage Device ....... $679_7            Storage Device ....... $885_12
7. Equipment Number ....... 0(10)         12. Equipment Number ....... 0(10)
8. Unit Number ............ 0(10)         13. Unit Number ............ 32(10)


                    NOS/VE Deadstart Command Processor.
Enter a menu number to change a value or
Press NEXT to accept parameters and continue the deadstart process
```

To enter or change a value in the boot display, first enter the number (from 1 to 13) of the display field. The prompt line at the bottom of the display describes the options that can be specified for that field.

Step 3: Enter System Core Commands

When the prompt Enter system core commands: appears, enter the system core commands as shown in the sample dialogue below.

```
Enter system core commands:

INITIALIZE_SYSTEM_DEVICE volume_name
SET_TIME_ZONE hours minutes daylight
SET_SYSTEM_ATTRIBUTE NETWORK_ACTIVATION 0
SET_INSTALLATION_TAPE packing_list 'evsn',,type
  .
  .  any desired SET_SYSTEM_ATTRIBUTE commands
  .
AUTO
```

Replace volume_name with a 1- to 6-character name which represents the name of your system device.

Replace hours, minutes, and daylight with appropriate values for the SET_TIME_ZONE command as documented in the System Core Commands chapter of the SPMM/Vol2. For example, to represent Central Standard Time, enter SET_TIME_ZONE -6 0 NO.

Replace packing_list with any 1- to 16-character SCL name for the file where the packing list file should be stored. This file name is used on subsequent INSTALL_PRODUCT commands.

Replace evsn with the 1- to 6-character external VSN of the first installation tape. The VSN for the tape can be found in the media number field of the external tape label. Even if your order contains multiple tapes, it is only necessary to supply the VSN of the first tape. The first installation tape contains the words FULL/PACKING LIST in the name field of the external tape label. Any additional tailored product tapes contain the words FULL/ADDITIONAL in the name field of the external tape label.)

Replace type with one of the following keyword values:

MT9$6250	(for orders written on 9-track tape at 6250 cpi)
MT9$1600	(for orders written on 9-track tape at 1600 cpi)
MT18$38000	(for orders written on cartridge tape)

You can change the setting of system attributes with the SET_SYSTEM_ATTRIBUTES system core command. System attributes are described in the Adjusting System Attributes chapter of the SPMM/Vol1. System core commands are described in the System Core Commands chapter of the SPMM/Vol2.

The system proceeds to read the deadstart tape and displays messages on the console.

The system completes processing the system core commands and displays the Physical Configuration Utility (PCU) prompt described in step 4.

Step 4: Install the Physical Configuration

Because the deadstart file is unconfigured, NOS/VE provides a menu containing two ways to provide a configuration:

```
The deadstart file is unconfigured.

You have the following choices:
   1 - Install the default physical configuration.
   2 - Enter the PHYSICAL_CONFIGURATION_UTILITY (PCU) to define and
       install your physical configuration.
Enter selection or ?  for HELP.
```

If you are going to run the NOS/VE network, you must select choice 2 in the menu in order to define any CDCNET device interfaces (DIs) which are connected to your mainframe. Control Data recommends that you delay the definition of any other peripherals until you can use EDIT_FILE (either through the dual state network or the NOS/VE network) to define the complete physical configuration.

Respond with a 2, which allows you to enter PCU subcommands to define a CDCNET DI (or any other peripherals).

In response to the selection of choice 2, the following text is displayed.

```
The file $local.physical_configuration  has been created for you.
This file contains the DEFINE_ELEMENT subcommands for the system
disk subsystem and the tape subsystem used for this deadstart.

The element names and serial numbers of these peripherals have been
invented by NOS/VE; please correct this information now.   The
following commands are used to correct and install the physical
configuration:

  EDIT_PHYSICAL_CONFIGURATION
     ADD_ELEMENT_DEFINITION     (for each new peripheral)
     CHANGE_ELEMENT_DEFINITION (to correct serial number)
     CHANGE_ELEMENT_NAME        (to correct element name)
  QUIT
  INSTALL_PHYSICAL_CONFIGURATION
  QUIT
 Press RETURN/NEXT when ready to continue.
```

Press the RETURN/NEXT key to continue with the deadstart.

The following text is displayed:

```
ENTERING THE PHYSICAL CONFIGURATION UTILITY
PCU/
```

You must now enter the EDIT_PHYSICAL_CONFIGURATION (EDIPC) utility and use the ADD_ELEMENT_DEFINITION (ADDED) subcommand to define each device. PCU and EDIPC are described in the Physical Configuration Utility chapter of the SPMM/Vol2.

The following shows the ADD_ELEMENT_DEFINITION parameters used to define a physical element.

```
PCU/EDIT_PHYSICAL_CONFIGURATION
  PCE/ADD_ELEMENT_DEFINITION E=element_name EI=element_id ..
  PCE../SN=serial_number IC=channel_number
```

where element_name, element_id, serial_number, and channel_number are taken from the checklist on pages 2-3 and 2-4.

You can define additional peripherals at this point, but it is easier if you wait until you can use EDIT_FILE from a configuration terminal.

NOTE

The remaining instructions in this step are written with the assumption that you did not define additional mass storage devices during this step.

When all definitions are complete, exit EDIPC and install the configuration using the PCU subcommand INSTALL_PHYSICAL_CONFIGURATION (INSPC):

```
PCE/QUIT
PCU/INSTALL_PHYSICAL_CONFIGURATION
```

If there are errors in the configuration definitions, use EDIPC to correct them then reinstall the configuration. When the physical configuration has been installed successfully, enter:

```
PCU/QUIT
```

After you exit PCU, the following menu appears:

```
The physical configuration has been installed.


You have just completed an operator intervention to correct a problem
with the configuration.  Because of the original problem, you may
have to perform additional reconfiguration.


USE_CONFIGURATION_PROLOG selection:  NONE
Configuration prolog to be executed: NONE


NOS/VE RECONFIGURATION MENU - SYSTEM SET INITIALIZATION -

You have the following choices for reconfiguration:
   1 - Intervene to change the logical configuration.
Enter selection, GO, or ?  for HELP.
```

Enter GO to continue as no LCU changes are required.

Step 5: Install the Initial Set of NOS/VE Software

The system asks you to mount the first tailored product tape. The first product tape has the words FULL/PACKING LIST in the name field of the external tape label.

Remove the deadstart tape and mount the first tailored product tape. The tape is automatically assigned and processed. The following messages appear:

```
Installing Installation Tape ...

Requesting installation tape with EVSN='evsn' RVSN='evsn' and TYPE=
type ...
The installation identifier assigned to this job is INSP_packing_list_A.
Installing x subproducts (6 steps).
```

The evsn, packing_list, and type reflect the parameters you entered on the SET_INSTALLATION_TAPE system core command in step 3 on page 2-11.

NOTE

If your release tapes were written at 1600 bpi, you may be required to mount an additional product tape. Watch for the word ACTION to flash on the right hand side of the console screen. If this occurs, press the STOP key and F4 function key. This will bring up a display that shows the tape VSN being requested. The VSN can be found in the MEDIA NO. field of the external tape label. Mount the tape and the flashing word ACTION will disappear. Enter the following command to resume processing:

```
RESUME_COMMAND
```

Several additional messages appear showing the progress of the installation process including a second installation identifier statement and a set of installation steps. When the initial set of NOS/VE software has been installed, the following message appears:

```
Installation Tape installed.
```

Several more messages appear as the system is activated. The messages differ between dual state and standalone systems. The final message is:

```
----- SYSTEM ACTIVATION COMPLETE -----
```

Step 6: Create the Default Family

NOTE

The family name must be unique among family names on the system. For sites installing the Permanent File / Queue File Transfer (PTF/QTF) facility, family should also be unique among the family names for all linked systems. Refer to page 3-71 for more information about PTF/QTF installation.

The following names cannot be used as a NOS/VE family name if you are using C/VE or VX/VE:

BIN, DEV, ETC, FRL, INSTALL, IPC, LIB, MAINTENANCE, TMP, USR, VX.

VX and C first check the file name /xxx to determine if it is a valid family name. If it is not, VX and C assume it exists in the root directory.

Enter the following commands to create the default family and assign the family administrator user name:

```
CREATE_INSTALLATION_ENVIRONMENT
  CREATE_DEFAULT_FAMILY FN=family UN=user_name PW=password ..
    AN=account_name PN=project_name PFS=permanent_file_set
  QUIT
```

Replace family with the name you have chosen to be the default family, user_name with the user name for the administrator of the family, and password with the password given to the administrator user name.

Replace account_name and project_name with the account and project names respectively you are using for the default family administrator user name if you wish to use account or project level validation. Both of these parameters are optional and default to the value NONE. Refer to the NOS/VE User Validation manual (60464513) for details on user validation.

The optional parameter permanent_file_set specifies the name for the set of storage devices on which permanent files for the family are to be stored. The default value is the name for the system set of devices (NVESET).

All parameters must be valid SCL names.

The following remarks apply to the CREATE_DEFAULT_FAMILY (CREDF) command.

- To install a dual state environment, user_name must be a valid NOS or NOS/BE user name. This allows you to log into NOS/VE through the dual state partner.

- CREDF sets the default login family name for interactive and batch system access via the CHANGE_JOB_ATTRIBUTE_DEFAULTS (CHAJAD) command. CREDF also adds the CHANGE_JOB_ATTRIBUTE_DEFAULTS command to the $SYSTEM.PROLOGS_AND_EPILOGS.SYSTEM_INITIATION_PROLOG so that these attributes are set automatically during every deadstart. CHAJAD is described in the Operator Commands and Displays chapter of the NOS/VE Operations manual (60463914).

- CREDF creates the catalog $SYSTEM.SITE_OS_MAINTENANCE and the subcatalog $SYSTEM.SITE_OS_MAINTENANCE.DEADSTART_COMMANDS. CREDF gives specific permissions (see details below) to the user name that was defined by the UN parameter of the CREDF command. These permissions let you manipulate the files necessary to perform this installation. You may use the CHANGE_CONFIG_FILE_ACCESS subcommand of CREATE_INSTALLATION_ENVIRONMENT to rescind these permissions later. CHANGE_CONFIG_FILE_ACCESS is documented in the Software Installation chapter of the SPMM/Vol2.

  The file and catalog permits set by CREDF are:

  - READ access to file $SYSTEM.MAINFRAME.CONFIGURATION.

  - READ, SHORTEN, APPEND, MODIFY, EXECUTE, CYCLE and CONTROL access to catalog $SYSTEM.SITE_OS_MAINTENANCE.

  - READ and EXECUTE access to file $SYSTEM.MANUALS.SITE_ANALYST_EXAMPLES.

  - READ and EXECUTE access to file $SYSTEM.MANUALS.EXAMPLES_FILES.
    SITE_ANALYST_SOURCE_LIBRARY.

- CREDF copies the current mainframe configuration from the file $SYSTEM.MAINFRAME.CONFIGURATION to the file $SYSTEM.SITE_OS_MAINTENANCE.DEADSTART_COMMANDS.PHYSICAL_CONFIG.

Step 7: Define the NOS/VE Network

This section describes how to define the basic network facilities for your operating system, how to configure a terminal for completion of NOS/VE installation, and how to configure an ASYNC printer. This step is required for standalone systems. It is optional for dual state systems because dual state sites can connect the configuration terminal to NAM/CCP, NAM/CDCNET, or INTERCOM 5.

You must have a CDCNET DI or an ICA defined in your physical configuration before you can perform this step.

If the DI you defined is connected or will be connected to an existing CDCNET network, you may need to modify the DI configurations created by DEFINE_NETWORK at a later time (for example, to change the network identifier of the Ethernet). Consult the CDCNET Configuration guide (60461550) for information about what updates may be required as well as the process used to update the configurations.

The NOS/VE network installation consists of two parts:

1. Define the network configuration
2. Reset the device interfaces (DIs)

Define the Network Configuration

Definition of the network configuration is done by the DEFINE_NETWORK procedure. Invoke the procedure by entering the following command at the system console:

```
DEFINE_NETWORK
```

The following menu is displayed.

```
Define Network

1.  Define the network configuration
2.  Define the CDCNET configuration
3.  Activate the network
4.  Define the Timesharing application

Enter a menu selection, QUIT, or ?:
```

Enter the number 1 to begin defining connections between NOS/VE and CDCNET. When you have defined the connections, the system redisplays the above menu.

The menu items should be completed in order. If you need help at any point, enter a question mark (?).

When you have finished all the menu items, type:

```
QUIT
```

Reset your DIs according to the instructions on page 2-22.

All menus within DEFINE_NETWORK use the same conventions for user responses to menu prompts. They are:

QUIT Terminates the current menu operation and returns to the previous menu. Changes you made to the menu are ignored.

GO Specifies that parameters are to be accepted and an operation is to be performed on those parameters, for example, configuring a DI or installing the network configuration. GO is not displayed for all menus. Pressing the NEXT key is equivalent to entering GO when GO is displayed in the menu prompt.

? Displays help information.

When prompted for a specific parameter value (for example, the network identifier or the timesharing title), you may press the NEXT key to indicate you do not want to supply a value. Then the previous value entered (if any) is retained.

A brief description of the selections on the DEFINE_NETWORK main menu is given below. More complete information is provided in the help text available for each selection. Information for the prompts should be taken from the checklist on page 2-3.

Selection 1: Define the network configuration.

This selection prompts you to define connections between NOS/VE and CDCNET. NOS/VE connects to CDCNET through a channel connection to an MDI or MTI on CYBER mainframes other than the 930 series.

This selection also prompts you to define the host network identifier. The host network identifier is used for routing messages over the OSI protocol stack. You must define a host network identifier for this host, and it must be unique within the CDCNET network to which the host is connected.

This selection, when using the option to define the TCP/IP host, also configures NAM/VE to use the TCP/IP Communication Device Support Software. This enables communication with the CDCNET TCP/IP access software to a MDI or ICA-II.

This selection also provides an option to define EXPRESS Link connections if PCU definitions exist for EXPRESS Link.

Selection 2: Define the CDCNET configuration.

For each CDCNET Device Interface (DI) you are configuring:

1. Supply the DI type, that is, mainframe device interface (MDI), mainframe terminal interface (MTI), or terminal device interface (TDI).

2. Supply the last six digits of the system identifier. The DI system identifier is a 12-digit number that is printed on a tag attached to the inside of the DI cabinet. The prompt requires you to enter only the last six digits (the first six digits are always 080025). Please note that the printed tag contains a 4-digit checksum sequence following the 12-digit DI system identifier. The checksum digits should not be included in the 6-digit value requested.

3. Optionally define an ASYNC terminal. For every MTI or TDI that is defined, a terminal is automatically defined on LIM 0 PORT 0. This option allows you to define other terminals on other PORTs and LIMs. This capability should be used if your terminal is not connected to LIM 0 PORT 0.

4. Optionally define an ASYNC printer. This allows you to define a line for an ASYNC printer on your TDI or MTI.

This creates an initial configuration for each DI which allows you to log into NOS/VE from the terminal.

Selection 3: Activate the network.

This selection activates NAM/VE and its associated tasks. No questions are asked.

Selection 4: Define the Timesharing application.

This selection prompts you to supply at least one title which is used to access the NOS/VE system. This is the title users must specify on the CDCNET CREATE_CONNECTION (CREC) command each time they log in. We suggest you define a short and convenient name to use for this purpose, perhaps the same name as the default family. It must be unique within the network because it specifies a particular mainframe.

Reset DIs

Reset each DI that you defined via the DEFINE_NETWORK command. To reset a DI, open the front panel and reset the toggle switch (pull out and push down) on the main processor board (MPB). The MPB is the first large board from the left side of the cabinet. It takes several minutes to load the DIs you defined. Progress of the load operation is determined by viewing the job log display on the system console. To display the job log, enter:

```
VEDISPLAY DO=JOB_LOG
```

The following messages appear during the DI load sequence. These messages do not indicate abnormal conditions.

```
--ERROR NA 2120-- DI 80025ssssss reset with reset code 2(16).
```

where 80025ssssss is the system ID of the DI.

Completion of a DI load is indicated by the following message in the job log:

```
CLOCK SYNC SUCCESSFUL
```

Step 8: Log into the Configuration Terminal

If you are utilizing the NOS/VE network, use the following login procedure:

1. At the terminal, press the carriage return key two or three times. After several CDCNET connection messages are displayed, the following message appears:

```
You may enter CDCNET commands
```

2. Enter the CREATE_CONNECTION (CREC) command:

```
CREATE_CONNECTION name
```

   Replace name with the timesharing title you defined in step 7.

3. Enter the appropriate information in response to the system prompts for your user name and password, as previously defined by the CREATE_DEFAULT_FAMILY command on page 2-17. For example:

```
Connection $A created.

Enter validation for service access.
User: user_name password
```

Replace user_name and password with the user name and password, respectively that you created with the CREATE_DEFAULT_FAMILY subcommand on page 2-17

For dual state environments with NOS, you may log into NOS/VE through NAM/CCP or NAM/CDCNET. Follow the normal NOS login process specifying VEIAF for the application name.

For dual state environments with NOS/BE, you may log into NOS/VE through INTERCOM 5 using the normal NOS/BE login process. Use the user name and password created by CREATE_DEFAULT_FAMILY on page 2-17. When the command prompt appears, enter the following to access the NOS/VE system.

```
VEIAF
```

Step 9: Define Your Physical Configuration

This step creates the PHYSICAL_CONFIG and PROLOG_LIBRARY files. These files are used to define the mainframe's physical configuration and establish the logical disk configuration. They are also used for the initialization of your disks. These files are added to the deadstart tape you will create in step 10 on page 2-28. All commands issued during this step should be entered at a terminal. The SPMM/Vol2 describes the file formats and provides additional information on modifying these files.

The SPMM/Vol2 also explains how to use PCU subcommands to define your physical configuration and contains examples of configuration definitions. Additional examples are available through the Site Analyst Examples Online manual. You may view the online manual by entering the following command:

```
EXPLAIN M=SITE_ANALYST_EXAMPLES
```

Select the Installation and Configuration Examples option. Once in this section of the online manual, you may select the appropriate example for whatever device you want to configure. After selecting the example, you may view it (using EDIT_FILE) or copy it to another file. (If you are in standalone mode, the PRINT option does not work at this time since you have not yet activated batch input/output.)

The PHYSICAL_CONFIG and PROLOG_LIBRARY files reside in subcatalog $SYSTEM.SITE_OS_MAINTENANCE.DEADSTART_COMMANDS.

1. Modify the PHYSICAL_CONFIG file. The file was created by the CREATE_DEFAULT_FAMILY subcommand of the CREATE_INSTALLATION_ENVIRONMENT utility in step 6.

   a. Enter the following commands:

```
CHANGE_WORKING_CATALOG ..
  C=$SYSTEM.SITE_OS_MAINTENANCE.DEADSTART_COMMANDS
CHANGE_TERMINAL_ATTRIBUTE TERMINAL_MODEL=model
EDIT_FILE F=PHYSICAL_CONFIG
```

   Replace model with the name of your terminal model. Refer to the NOS/VE Terminal Definition manual (60464016) for more information about terminal attributes and terminal models.

b. Use EDIT_FILE to modify the PHYSICAL_CONFIG file to describe your full physical configuration.

   Specifically, you can:

   - Correct the serial numbers in the element definitions for the system device and the deadstart device.
   - Change the names of the system device and the deadstart device. This is optional but you may want to use names other than those supplied by the system.
   - Add DEFINE_ELEMENT subcommands necessary to define the remainder of your physical configuration.
   - If you plan to install the Optical Storage System product and have the appropriate optical storage hardware, you may configure the hardware at this time in order to include it on the configured deadstart tape which will be generated later in the installation process. Refer to the Installation Validation and Accounting chapter of the NOS/VE Optical Storage System manual (60463926) for details and a sample configuration.

c. Exit EDIT_FILE when you finish describing your physical configuration. Use PCU to check for errors in your physical configuration definitions by entering the following commands:

```
PHYSICAL_CONFIGURATION_UTILITY
  VERIFY_PHYSICAL_CONFIGURATION I=PHYSICAL_CONFIG
```

d. Exit PCU by entering the following command:

```
QUIT
```

   If errors were discovered in the configuration file, re-enter EDIT_FILE and correct the erroneous definitions. Then enter PCU again to check the corrected file using VERIFY_PHYSICAL_CONFIGURATION (VERPC). Repeat this process until the file is error free.

2. Create the PROLOG_LIBRARY file that prepares your mass storage volumes for use. The PROLOG_LIBRARY file is created by the MAINTAIN_DEADSTART_SOFTWARE subcommand CREATE_PROLOG. The subcommand processes the text file PROLOG_FILE, which you create.

   a. Enter the EDIT_FILE command to create a file that contains the LCU subcommands to be included in the configuration prolog:

```
EDIT_FILE F=$LOCAL.PROLOG_FILE
```

   b. Insert LOGICAL_CONFIGURATION_UTILITY (LCU) subcommands to initialize the mass storage volumes in your physical configuration, define the mass storage class membership of the volumes, and add them to the system set. For each disk volume (except the system device) in your configuration, insert the following LCU subcommands:

```
INITIALIZE_MS_VOLUME E=name RVSN=vsn
CHANGE_MS_CLASS RVSN=vsn DC=(classes to delete) ..
  AC=(classes to add)
ADD_VOLUME_TO_SET MEMVSN=vsn
```

   Replace name with the element name of the disk device on which the volume is mounted, vsn is a 1- to 6-character volume serial number (VSN) you want to assign to this volume, and the classes to add or delete are identified by a single alphabetic character in the interval B..Z. (Note: Class A is on all devices.) These subcommands and the mass storage classes are described in the Logical Configuration Utility chapter of the SPMM/Vol2.

NOTE

The vsn value must be a valid SCL name, not a string.

Remarks:

- Do not include INITIALIZE_MS_VOLUME and ADD_VOLUME_TO_SET subcommands for the system device. The system device is initialized and added to the system set by the INITIALIZE_SYSTEM_DEVICE system core command. However, you should include a CHANGE_MS_CLASS subcommand for the system device.

- Specification of a mass storage class for all volumes is particularly important. At a minimum, you should remove class Q (system critical files) from all volumes except the system device and assign class J (system catalogs) to only one volume. Changing these classes is most important because the unavailability of any class J or class Q volume causes the system to automatically enter the stepped state. Refer to the Fault Tolerance chapter of the SPMM/Vol2 for the other recommendations on how to use mass storage classes to improve performance and fault tolerance.

- You may wish to use the command CHANGE_MS_VOLUME to specify a default allocation size and/or a default transfer size for one or more of your mass storage volumes. This is used to tune performance. Refer to the Handling Bottlenecks in the System chapter of the SPMM/Vol1 for a discussion of how to use allocation size and transfer size. Refer to the Logical Configuration Utility chapter of the SPMM/Vol2 for more information about the CHANGE_MS_VOLUME command.

- Control Data recommends that you include INITIALIZE_MS_VOLUME and ADD_VOLUME_TO_SET subcommands for all volumes in your configuration except the system device. Further, it is recommended that you include the CHANGE_MS_CLASS subcommand for all devices in your configuration.

c. Exit EDIT_FILE when you have finished describing your logical configuration.

d. Enter the following commands to create a configuration prolog from the LCU subcommands contained on file $LOCAL.PROLOG_FILE. The resulting SCL procedure is placed in file $SYSTEM.SITE_OS_MAINTENANCE.DEADSTART_COMMANDS.PROLOG_LIBRARY (in the working catalog specified earlier in this step). The CREATE_PROLOG command, plus other information about maintaining or updating your prolog library, is documented in the Deadstart File Software chapter of the SPMM/Vol2.

```
CREATE_COMMAND_LIST_ENTRY E=$SYSTEM.OSF$BUILTIN_LIBRARY
MAINTAIN_DEADSTART_SOFTWARE
  CREATE_PROLOG FILE=LCU_MAINFRAME_SUBCOMMANDS ..
    INPUT=$LOCAL.PROLOG_FILE
  QUIT
```

Step 10: Create a New Deadstart Tape

This step uses the REPLACE_DS_TAPE_CONFIGURATIONS subcommand of the MAINTAIN_DEADSTART_SOFTWARE utility to add the files previously created in step 9 to the deadstart file. This command searches the subcatalog $SYSTEM.SITE_OS_MAINTENANCE.DEADSTART_COMMANDS for files PHYSICAL_CONFIG and PROLOG_LIBRARY. These files are replaced on the deadstart file and a new deadstart tape is written. All commands issued during this step should be entered from a terminal.

To create a new deadstart tape:

1. Remove the unconfigured deadstart tape and mount a new tape with a write ring. This tape will become your new NOS/VE 1.7.1 L803 deadstart tape.

2. Label a tape which will become your new NOS/VE 1.7.1 L803 deadstart tape. This tape should be labeled with the VSN you will specify on the OEV parameter of the REPLACE_DS_TAPE_CONFIGURATIONS command.

   To label a tape, enter the following command at the system console:

```
CREATE_BLANK_LABELED_VOLUME E=element ..
  EVSN='evsn' D=tape_density ..
  LC=LABEL_FOR_GROUP RMG=RELEASE_TAPES
```

   Replace element with $DEADSTART_DEVICE.

   Replace evsn with the 1- to 6-character external VSN of the tape you are labeling as your new deadstart tape.

   Replace tape_density with one of the following keyword values:

MT9$6250	(for a deadsstart tape wrtten on 9-track tape at 6250 cpi)
MT9$1600	(for a deadstart tape written on 9-track tape at 1600 cpi)
MT18$38000	(for a deadstart tape written on cartridge tape)

   When labeling is complete, remove the new deadstart tape and mount the unconfigured deadstart tape (without a write ring) provided with your order.

NOTE

You will receive a warning when you specify RMG=RELEASE_TAPES if you are not validated for RELEASE_TAPES.

---

3. Write a new deadstart tape, replacing the configuration with the one created in step 9. Use the REPLACE_DS_TAPE_CONFIGURATIONS subcommand of the MAINTAIN_DEADSTART_SOFTWARE utility. Refer to the Deadstart File Software chapter of the SPMM/Vol2 for details on replacing the configuration on a deadstart tape.

4. The system requests the unconfigured deadstart tape and assigns it automatically after it has been mounted. When the tape has been read, information about the new deadstart tape is displayed on the terminal. When the unconfigured tape unloads, mount the new deadstart tape with a write ring.

5. Log off the terminal.

Step 11: Redeadstart the System

Redeadstarting the system from the tape created in step 10 causes the PCU and LCU commands which you placed in file PROLOG_LIBRARY to be executed. At the end of this deadstart, the full physical configuration (as described by the PCU and LCU subcommands you previously specified in step 9) is activated.

From the system console:

1. Terminate the system by entering:

   ```
   TERMINATE_SYSTEM
   ```

2. Initiate a deadstart of NOS/VE.

   a. For dual state systems:

      From the NOS or NOS/BE console, activate the procedure which initiates a NOS/VE deadstart with operator pause. Page 4-2 describes these procedures.

      On NOS, enter: NVExxxx.

      On NOS/BE, enter: n.X NVE(xxxx,id)

      After deadstart is initiated, control of NOS/VE is transferred from the NOS or NOS/BE system console to the NOS/VE console, where the deadstart boot display appears.

b. For standalone systems other than the CYBER 2000, initiate CIP execution by following the directions in the column that pertains to your system. To initiate CIP execution on the CYBER 2000, follow the directions in the substep c on page 2-32.

CC545, CC634B, or CC598B/E	CC598A/D	CC595 or CC599
1. - If your console is equipped with a button, press the button labeled DEADSTART BUTTON. - If your console does not have a deadstart button, press CTRL and G keys simultaneously then press the CTRL and R keys simultaneously. If your mainframe is a CYBER 815 or 825, press the S and then the NEXT key. 2. If the DEADSTART OPTIONS screen appears, press: S 3. From the INITIAL OPTIONS menu, select OS LOAD WITH INTERVENTION by pressing: 0	1. Bring up the CONSOLE MAIN MENU by pressing the CTRL and F2 keys simultaneously. If the CONSOLE MAIN MENU does not appear, press the CTRL, ALT, and DEL keys simultaneously The Control Data logo appears. After 10 seconds, the CONSOLE MAIN MENU appears. 2. From the CONSOLE MAIN MENU, select the INITIAL OPTIONS menu by pressing: S 3. From the INITIAL OPTIONS menu, select OS LOAD WITH INTERVENTION by pressing: 0 4. From the OS LOAD WITH INTERVENTION menu, select CONTINUE OS LOAD by pressing: A	1. Bring up the CONSOLE MAIN MENU by pressing the ESC key. If the CONSOLE MAIN MENU does not appear, press the ALT and F2 keys simultaneously. 2. Select OS LOAD WITH INTERVENTION by pressing: L

(Continued on next page.)

CC545, CC634B, or CC598B/E	CC598A/D	CC595 or CC599
4. From the OS LOAD WITH INTERVENTION menu, select CONTINUE OS LOAD by pressing: A		

c. For CYBER 2000 deadstarts, follow the directions below.

1. Bring up the Main Menu by pressing CTRL and F8 simultaneously. If the Main Menu is not present, you will need to press 1.

2. From the MAIN MENU, select ALLOW O/S LOAD INTERVENTION by entering:

A

3. The deadstart boot display appears with the same values as entered in step 2 on page 2-9, or page 6-5. If your deadstart tape is on the same tape device, press NEXT to accept the displayed values. If your deadstart tape is on a different device, make appropriate changes to the device description before pressing NEXT.

4. When the prompt Enter system core commands: appears, enter:

```
USE_INSTALLED_CONFIGURATION FALSE
GO
```

The first command installs the configuration from the NOS/VE deadstart tape.

After entering the system core command GO, numerous messages are displayed, ending with the following menu:

```
You have requested a pause for operator intervention.


NOS/VE RECONFIGURATION MENU - CONTINUATION DEADSTART -

You have the following choices for reconfiguration:
   1 - Intervene before installing the physical configuration.
   2 - Intervene before activating existing mass storage set
       members.
   3 - Intervene after activating existing mass storage set members.
Enter selection, GO, or ?  for HELP.
```

Respond by entering 2.

5. Execute the LCU_MAINFRAME_SUBCOMMANDS file previously created in step 9 after the following lines are displayed and the LCU prompt appears:

```
ENTERING THE LOGICAL CONFIGURATION UTILITY


This is a continuation deadstart.
YOU CANNOT REFERENCE PERMANENT FILES.
YOU MAY ONLY USE SUBCOMMANDS OF THIS UTILITY.
```

Enter the following commands:

```
LCU/CMP$EXECUTE_PROLOG_COMMANDS PF=LCU_MAINFRAME_SUBCOMMANDS
LCU/QUIT
```

The following menu appears:

```
NOS/VE RECONFIGURATION MENU - CONTINUATION DEADSTART
You have the following choices for reconfiguration:
  1 - Intervene after activating existing mass storage set
      members.
```

Enter GO.

Numerous diagnostic messages are displayed as LCU processes the file.

6. Exiting LCU causes the display of the installation options menu:

```
The system has recovered some jobs which have started to execute.  To
prevent running mixed levels of software, no installation options are
allowed.

Your system activation choices are:

1.  Activate the system for production.
2.  Activate the system for system console usage only.
    NOTE: Recovered jobs will continue to execute.

Enter selection or ?  for HELP.
```

   Choose selection 1.

7. Wait for the following message to be sure that system activation is complete.

```
----- SYSTEM ACTIVATION COMPLETE -----
```

Step 12: Copy the Deadstart File to the System Disk

This step copies the deadstart file to the system disk and establishes it for use in future continuation deadstarts. Use the MAINTAIN_DEADSTART_SOFTWARE utility subcommands ESTABLISH_DISK_BASED_SYSTEM and COMMIT_NEW_SYSTEM to copy the deadstart tape to disk and commit the system to allow disk deadstarts.

Refer to the Deadstart File Software chapter of the SPMM/Vol2 for details on establishing a disk based system. Follow the steps indicated using the new deadstart tape you created in step 10 on page 2-28.

Step 13: Set Boot Display to Automatically Deadstart

This optional step sets the deadstart boot display to specify an automatic deadstart from the default disk device established in step 2 on page 2-9.

For standalone systems, this means you can deadstart NOS/VE by entering the A (Automatic) option on the CIP INITIAL OPTIONS screen.

For dual state systems, this means you can deadstart NOS/VE by entering the deadstart procedure that specifies a deadstart without operator pause if the boot display has previously been set for a disk deadstart.

Perform the following tasks to set the deadstart boot display.

1. Enter the following command at the NOS/VE console to terminate NOS/VE:

   ```
   TERMINATE_SYSTEM
   ```

2. Initiate a deadstart of NOS/VE.

   a. For dual state systems:

      From the NOS or NOS/BE console, activate the procedure which initiates a NOS/VE deadstart without operator pause. Page 4-2 describes these procedures.

      On NOS, enter: NVExxxx.

      On NOS/BE, enter: n.X NVE(xxxx,id)

      After deadstart is initiated, control of NOS/VE is transferred from the NOS or NOS/BE system console to the NOS/VE console, where the deadstart boot display appears.

b. For standalone systems other than the CYBER 2000, initiate CIP execution by following the directions in the column that pertains to your system. To initiate CIP execution on the CYBER 2000, follow the directions in the subsection c on page 2-38.

CC545, CC634B, or CC598B/E	CC598A/D	CC595 or CC599
1. - If your console is equipped with a button, press the button labeled DEADSTART BUTTON. - If your console does not have a deadstart button, press the CTRL and G keys simultaneously, then press the CTRL and R keys simultaneously. If your mainframe is a CYBER 815 or 825, press the S and then the NEXT key. 2. If the DEADSTART OPTIONS screen appears, press: S 3. From the INITIAL OPTIONS menu, select OS LOAD WITH INTERVENTION by pressing: O	1. Bring up the CONSOLE MAIN MENU by pressing the CTRL and F2 keys simultaneously. If the CONSOLE MAIN MENU does not appear, press the CTRL, ALT, and DEL keys simultaneously The Control Data logo appears. After 10 seconds, the CONSOLE MAIN MENU appears. 2. From the CONSOLE MAIN MENU, select the INITIAL OPTIONS menu by pressing: S 3. From the INITIAL OPTIONS menu, select OS LOAD WITH INTERVENTION by pressing: O	1. Bring up the CONSOLE MAIN MENU by pressing the ESC key. If the CONSOLE MAIN MENU does not appear, press the ALT and F2 keys simultaneously. 2. Select OS LOAD WITH INTERVENTION by pressing: L

(Continued on next page.)

CC545, CC634B, or CC598B/E	CC598A/D	CC595 or CC599
4. From the OS LOAD WITH INTERVENTION menu, select CONTINUE OS LOAD by pressing: A	4. From the OS LOAD WITH INTERVENTION menu, select CONTINUE OS LOAD by pressing: A	

c. For CYBER 2000 deadstarts, follow the directions below.

1. Bring up the Main Menu by pressing CTRL and F8 simultaneously. If the Main Menu is not present, you will need to press 1.

2. From the MAIN MENU, select ALLOW O/S LOAD INTERVENTION by entering:

```
A
```

3. When the deadstart boot display appears, it should display the same values you entered in step 2 on page 2-9 or changed in step 11 on page 2-30. Change the values as follows:

Field	Entry
1	Specify Default disk.
2	Specify FALSE.
3	Specify DCF01.
4 through 8	Describe the system disk device.

When you have correctly entered the values on the boot display, press NEXT to continue with the deadstart.

4. Wait for the following message to signal that system activation is complete.

```
----- SYSTEM ACTIVATION COMPLETE -----
```

NOS/VE is now set up to perform an automatic deadstart the next time you need to deadstart the system.

NOTE

The boot display for the configuration for a disk deadstart is only updated during a deadstart from disk. It is not updated during a tape deadstart.

Step 14: Create Scheduling Classes

You should now create the definitions for the scheduling classes that your system will use. These definitions, once activated, are automatically recovered at every deadstart. By executing the CREATE_INSTALLATION_ENVIRONMENT subcommand CREATE_SCHEDULING_CLASS, you can create the initial default file and modify it if you are installing optional products Network Archiving, NFS, PTF/QTF, TCP/IP, or X/Windows.

Enter the following commands from the system console to generate your scheduling profile file:

```
CREATE_INSTALLATION_ENVIRONMENT
  CREATE_SCHEDULING_CLASS O=option AP=TRUE ..
    BSC=basisp_scheduling_class
  QUIT
```

- Replace option according to the following:

  DEFAULT to create the default scheduling profile file.

  ALL to create the default scheduling profile file plus classes for IM/BASISplus, Network Archiving, NFS, PTF/QTF, TCP/IP, and X/Windows.

  DEFAULT and one or more of the following:
  - BASISP
  - NETARC
  - NFS
  - PTF_QTF
  - TCP_IP
  - X_CLIENT

  any one or more of the following to add to the current set of job and scheduling classes:
  - BASISP
  - NETARC
  - NFS
  - PTF_QTF
  - TCP_IP
  - X_CLIENT

- Replace basisp_scheduling_class with the name of the scheduling class you wish to create for the IM/BASISplus kernel, if you are installing IM/BASISplus. The default value for the BSC parameter is DM_KERNEL. Omit the BSC parameter if you are not installing IM/BASISplus. The BSC parameter is ignored if BASISP or ALL is not specified on the options parameter.

NOTE

To use the RPC/XDR interface (part of the TCP/IP product), you must also define the job and scheduling class used by NFS even if you have not ordered the NFS product.

- If a JM 7083 error message occurs, it indicates that you have encountered the job or service class limit by attempting to define too many classes. You may increase the limit by entering the following commands:

```
SET_SYSTEM_ATTRIBUTE NAME=MAXIMUM_JOB_CLASSES ..
  VALUE=max_job_class
SET_SYSTEM_ATTRIBUTE NAME=MAXIMUM_SERVICE_CLASSES ..
  VALUE=max_service_class
```

  Replace max_job_class with an integer representing the maximum number of job classes and max_service_class with an integer representing the maximum number of service classes.

  These SET_SYSTEM_ATTRIBUTE (SETSA) commands should be added to your DCFILE in order to be set automatically at each deadstart. Refer to the System Core Commands and Deadstart File Software chapters of the SPMM/Vol2 for more information on the SETSA and the DCFILE commands.

Step 15: Prepare for IM/BASISplus Installation

If you are installing IM/BASISplus, the instructions within this step MUST be performed before IM/BASISplus is loaded from the product tapes. If you are not installing IM/BASISplus, go to step 16.

Please note the following before installing IM/BASISplus on your system. If your site is performing an initial installation, you may disregard the notes that reference IM/DM migration.

- For performance reasons, Control Data strongly recommends that IM/BASISplus be executed with a central memory of at least 16 megabytes, although it does execute with a central memory of 8 megabytes.

- IM/BASISplus is designed to use a mainframe page size of 4K bytes for NOS/VE. Use of any other page size may have a negative impact on IM/BASISplus performance.

- IM/BASISplus software is installed on user name DMROOT (created below) on a family other than $SYSTEM. INSTALL_SOFTWARE assumes the family name is NVE unless you specify otherwise using the subcommand CHANGE_INSTALLATION_PATH.

- IM/BASISplus is installed in the .DMROOT.RELL1 subcatalog.

- Extreme care must be taken in planning the migration of existing databases to IM/BASISplus as there is no provision for "backward migration" to IM/DM. Sites should have in place an appropriate fall-back strategy since it is not possible to simply rely on the interchangeability of the DDB. One possible strategy is to simply save the IM/DM database files prior to moving to IM/BASISplus.

- After installation, IM/BASISplus reflects a "clean" ADB composed of the following databases:

  ```
  ACME
  ACMEO
  INDEX
  SYSA
  SYSRES
  TACME
  TOUR
  TTOUR
  ```

  A customer who previously used IM/DM may wish to initially use this demo IM/BASISplus ADB, or may prefer to "duplicate" the site's existing IM/DM ADB in IM/BASISplus. The site must remember to regenerate the DDB system records for any databases that are copied or moved to the IM/BASISplus system. It may be necessary to change the file paths for the database files (DDB and ODB) in moving or copying a database to the IM/BASISplus environment. These changes are done via ASSIGN/DB in DMSA and by using

DMDBA to change the FILE clause. Carrying the IM/DM ADB over to IM/BASISplus permits the transfer of existing information pertaining to user registration, authorization, and access privileges.

If the IM/DM ADB is moved forward, TOUR, TTOUR, and INDEX will not be present and will have to be merged into the ADB if the site so chooses. This process is documented in detail in the NOS/VE 1.7.1 L803 SRB.

Perform the following steps from the system console:

a. Create the user name DMROOT on the family where IM/BASISplus files are to be installed.

```
CREATE_INSTALLATION_ENVIRONMENT
  CREATE_DMROOT_USER_NAME PW=password F=family ..
    SC=scheduling_class AN=account_name PN=project_name
  QUIT
```

Replace password with the password desired for user name DMROOT and family with the name of the family you entered on the CREATE_DEFAULT_FAMILY command in step 6 on page 2-17. If you created a different scheduling class for IM/BASISplus on page 2-39 (that is, other than DM_KERNEL) replace scheduling_class with the name of the scheduling class you created in step 14.

If you plan to use account and project level validation, replace account_name and project_name with the account and project names you are using for the DMROOT user name. Both of these parameters are optional and default to the value NONE. Refer to the NOS/VE User Validation manual (60464513) for details on user validation.

User name DMROOT is where the IM/BASISplus files reside and where the IM/BASISplus kernel executes.

b. Use the INSTALL_SOFTWARE subcommand CHANGE_INSTALLATION_PATH to define the location of user name DMROOT. You may skip this step if the IM/BASISplus family name is NVE; otherwise, enter the following commands from the system console:

```
INSTALL_SOFTWARE
  CHANGE_INSTALLATION_PATH P=IM_BASISPLUS_PACKAGE FN=family ..
    PL=packing_list
  QUIT
```

Replace family with the name of the NOS/VE FAMILY in which you wish IM/BASISplus to reside (the family name you entered in the first half of this step).

Replace the packing list with the name of the packing list you specified in step 3 on page 2-11 for the SET_INSTALLATION_TAPE command.

Step 16: Load Product Tapes

You should now install the remaining required and optional products by using INSTALL_SOFTWARE (INSS) from the system console. If you wish to see what products are available for installation, you may execute the following commands:

```
INSTALL_SOFTWARE
  DISPLAY_PACKING_LIST PL=packing_list
  QUIT
```

Replace packing_list with the value you supplied for the packing list on page 2-11 in step 3.

This display shows all the licensed products on your order, and if special conditions exist, it may show some of the subproducts that make up a licensed product. For the purpose of simplifying product support and installation, some licensed products are subdivided into multiple subproducts. For example, CDCNET and Mail/VE Version 2 are subproducts of NOS/VE. Special conditions that would cause a subproduct to be displayed in this listing are:

- The subproduct will not be automatically installed (for example, DWB/VX is not installed automatically because it must be loaded after VX/VE has been loaded).

All licensed products in your order, except those not automatically installed, can be installed with a single INSTALL_PRODUCT command by specifying the P=ALL option. Those subproducts not automatically installed, such as ONLINE_MANUALS_SOURCE, must be installed by specifying the specific subproduct name on a separate INSTALL_PRODUCT command. Because some products are not automatically installed, there is a chance that not all product tapes will be requested.

While it is possible to install products singly by specifying the product name, Control Data recommends that the P=ALL option be used, provided you have enough disk space available to load all products at the same time. This is the most efficient way of installing product software.

NOTE

If you have a shortage of disk space, you may not be able to load all products. If you cannot load your software, two methods can be used to install your system. The first method is preferable to the second.

- Enter the INSTALL_PRODUCT command as described above, but only mount one tailored product tape at a time. Allow the batch job for that tape to finish before mounting the next tape.

- For more severe space problems, you may execute INSTALL_PRODUCT multiple times, each time specifying one or more individual product names on the P parameter. Refer to the Software Installation chapter of the SPMM/Vol2 for more information on how to specify products on the INSTALL_PRODUCT subcommand.

The following commands install all the licensed products on your order that were not installed during the initial deadstart process. These commands install only those products which are identified as being automatically installed.

```
INSTALL_SOFTWARE
 INSTALL_PRODUCT PL=packing_list P=ALL
 QUIT
```

Replace packing_list with the packing list you specified on the system core command SET_INSTALLATION_TAPE on page 2-11 in step 3.

After validating your input, this command displays the installation identifier for the installation. The installation identifier is the name of the subcatalog of catalog $SYSTEM.SOFTWARE_MAINTENANCE.INSTALLATION_LOGS where information about the installation is kept. The name of the catalog is of the form INSP_packing_list_x where packing_list is the packing list name and x is a letter incremented for each execution of INSTALL_PRODUCT subcommand.

A separate job is issued for each tailored product tape from which software is installed. The system prompts you to mount the tailored product tapes as they are needed. When the prompt appears, mount the requested reel on a NOS/VE tape drive. The tape is assigned and read automatically. The VSN for each requested tape is contained in the media number field on the external tape label.

If an installation job aborts for any reason, an operator request appears at the console. Note the message that includes the name of the installation job. Respond with the ACKNOWLEDGE_OPERATOR_MESSAGE operator command, look at the logs and note the error message, then contact Support Operations Customer Support.

To monitor the progress of the installation, you can check for the jobs on the active job display by entering:

```
VEDISPLAY DO=ACTIVE_JOBS
```

After all installation jobs complete, execute the following to list all of the products that were loaded.

```
INSTALL_SOFTWARE
 DISPLAY_INSTALLED_SOFTWARE
 QUIT
```

The display lists subproduct and licensed product names along with the level and date installed for each subproduct. If a subproduct of a licensed product did not install successfully, a message indicating which subproduct was not installed is displayed next to the subproduct name.

Step 17: Special Product Installation Tasks

At this point, turn to chapter 3 for instructions on how to complete the installation of the following products:

NOTE

Product names that contain the words NOS/VE in parentheses indicate that every NOS/VE customer has that product. These products are packaged as an integral part of NOS/VE.

- Accounting Analysis System and Accounting Utilities
- Archive/VE
- Archive/VE Option for 7990-NOS
- Batch Input/Output (NOS/VE)
- Cartridge System/VE for 5744
- Cartridge System/VE for 7992
- CDCNET (NOS/VE)
- CDCNET Separate TIPs
- C/VE
- Desktop/VE (NOS/VE)
- DWB/VX
- File Server
- File Transfer, Access, and Management Service (FTAM/VE)
- IM/BASISplus
- IM/Control
- IM/Fast
- IM/Smart
- Mail/VE Version 2 (NOS/VE)
- Network Archiving
- Network File System (NFS)
- Network Information Service (NIS)
- Network Lock Manager (NLM)
- Network Queuing System (NQS)
- Network Tranfer Facility (NTF)
- Network Validation
- Optical Storage System (NOS/VE)
- ORACLE
- Permanent File/Queue File Transfer Facility (PTF/QTF)
- Remote Host Facility Access Method (RHFAM)
- Remote Line Monitor (RLM)
- Removable Media Management System (RMS)
- Transmission Control Protocol/Internet Protocol (TCP/IP)
- VX/VE
- X/Windows
- X.400 Transfer Facility (XTF)

Follow the instructions provided in chapter 3 only for those products which you are installing.

NOTE

If you are installing Optical Storage System you will be instructed to add commands to the file $SYSTEM.PROLOGS_AND_EPILOGS.SYSTEM_PROLOG. The SYSTEM_PROLOG file does not exist in the NOS/VE release materials. After you create the SYSTEM_PROLOG file by adding the appropriate commands for Optical Storage, enter the following commands from the system console:

```
CHANGE_FILE_ATTRIBUTES ..
  FILE=$SYSTEM.PROLOGS_AND_EPILOGS.SYSTEM_PROLOG ..
  RING_ATTRIBUTES=(3,13,13)
CREATE_FILE_PERMIT ..
  FILE=$SYSTEM.PROLOGS_AND_EPILOGS.SYSTEM_PROLOG ..
  GROUP=PUBLIC ACCESS_MODE=EXECUTE
```

Step 18: Installation Wrap-Up

After completing the NOS/VE installation, we suggest that you perform the following additional tasks.

1. Read the Site Tailoring chapter of the SPMM/Vol2.

2. Do a permanent file backup of your system using the Permanent File Backup utility. The commands you use to back up system permanent files are described in the Permanent File Maintenance chapter of the SPMM/Vol2.

3. You may wish to turn off or alter the permissions for maintaining the $SYSTEM.SITE_OS_MAINTENANCE.DEADSTART_COMMANDS catalog. This is done with the CHANGE_CONFIG_FILE_ACCESS subcommand of the CREATE_INSTALLATION_ENVIRONMENT utility. Refer to the Software Installation chapter of the SPMM/Vol2 for more information.

4. If, while configuring your mass storage classes, you removed class K, class P, or both from the system device, you should reinstall the set of software installed automatically during the first deadstart of NOS/VE. If this is not done, the files remain on the system device until the next time NOS/VE is upgraded to a new level.

   a. Deadstart NOS/VE with operator intervention, enter GO at the system core commands prompt, enter GO at the reconfiguration menus, and activate the system for system console use only.

   b. Enter at the system console:

```
INSTALL_SOFTWARE
  INSTALL_PRODUCT PL=packing_list ..
    P=(NOSVE_INSTALLATION_BOOT,..
    NOSVE_INITIAL_SOFTWARE_LOAD) FORCE_REINSTALL=TRUE
  QUIT
```

   where packing_list is the value you have used throughout this chapter.

   A batch job is submitted to install the subproducts mentioned. The job requests one or more release tapes. The subproduct's old file cycles are deleted and the newly installed files placed on a device of the appropriate class, that is, class P or class K.

5. Fill out the Software Installation Quality Program questionnaire shipped with your software order and return it to Control Data at the address provided.

Chapter 3
Special Product INITIAL Installation Tasks

This chapter describes additional tasks you must perform to complete the initial installation of the following products:

- Accounting Analysis System and Accounting Utilities
- Archive/VE
- Archive/VE Option for 7990-NOS
- Batch Input/Output (NOS/VE)
- Cartridge System/VE for 5744
- Cartridge System/VE for 7992
- CDCNET (NOS/VE)
- CDCNET Separate TIPs
- C/VE
- Desktop/VE (NOS/VE)
- DWB/VX
- File Server
- File Transfer, Access, and Management Service (FTAM/VE)
- IM/BASISplus
- IM/Control
- IM/Fast
- IM/Smart
- Mail/VE Version 2 (NOS/VE)
- Network Archiving
- Network File System (NFS)
- Network Information Service (NIS)
- Network Lock Manager (NLM)
- Network Queuing System (NQS)
- Network Tranfer Facility (NTF)
- Network Validation
- Optical Storage System (NOS/VE)
- ORACLE
- Permanent File/Queue File Transfer Facility (PTF/QTF)
- Remote Host Facility Access Method (RHFAM)
- Remote Line Monitor (RLM)
- Removable Media Management System (RMS)
- Transmission Control Protocol/Internet Protocol (TCP/IP)
- VX/VE
- X/Windows
- X.400 Transfer Facility (XTF)

The chapter is organized alphabetically by product name.

NOTE

Product names followed by the words NOS/VE in parentheses signify that every NOS/VE customer has that product. These products are packaged as an integral part of NOS/VE.

Refer to the NOS/VE 1.7.1 L803 SRB for additional details on these special products.

Accounting Analysis System and Accounting Utilities

There are two accounting products on NOS/VE: the Accounting Analysis System and the Accounting and Validation Utilities.

To install these products, execute the following commands from an interactive terminal logged into the system administrator user name (This is the user name you defined in step 6 on page 2-17.):

NOTE

The system administrator user name must be given system adminstrator capabilities. To do this, refer to the NOS/VE User Validation manual (60464513).

```
SYSTEM_OPERATOR_UTILITY
  CREATE_COMMAND_LIST_ENTRY E=$SYSTEM.ACCOUNTING_ANALYSIS_SYSTEM
  INSTALL_ACCCOUNTING_ANALYSIS
  QUIT
```

For more information regarding activation and preparation for collecting accounting information, refer to the NOS/VE Accounting Analysis System manual (60463923) and the NOS/VE Accounting and Validation Utilities for Dual State manual (60458910).

Archive/VE

Archive/VE provides the capability of moving online primary file storage to a more cost effective secondary level of file storage. This secondary storage may be magnetic tape, cartridge tape, or Cartridge Storage/VE (cartridge storage system). It may also consist of any combination of these media.

Archive/VE Installation

To complete the installation of Archive/VE, you must add certain statements to the following prologs and epilogs:

```
$SYSTEM.PROLOGS_AND_EPILOGS.JOB_ACTIVATION_EPILOG
$SYSTEM.PROLOGS_AND_EPILOGS.SYSTEM_INITIATION_PROLOG
$SYSTEM.PROLOGS_AND_EPILOGS.SYSTEM_PROLOG
```

Perform the following commands from the system console to update these prologs and epilogs:

```
CREATE_INSTALLATION_ENVIRONMENT
  UPDATE_SYSFILES_FOR_ARCHIVE RP=retrieval_precedence_list
  QUIT
```

Replace retrieval_precedence_list with one or more of the following pre_defined processors:

TAPE	for open reel magnetic tape
CARTRIDGE_TAPE	for cartridge magnetic tape
CSS	for cartridge storage system (799x Mass Storage System)
ARCHIVE_TO_NOS	for the Archive/VE Options for 7990-NOS

The default processor is TAPE. It is necessary that these processors be listed in the order of retrieval precedence with the processor of highest precedence listed first.

The effect of the above statements above will occur at the next deadstart.

NOTE

If you wish to make any changes to the above prologs and epilogs after executing UPDATE_SYSFILES_FOR_ARCHIVE, you should grant a user access to the $SYSTEM.PROLOGS_AND_EPILOGS catalog and perform any further changes by using an editor from a terminal. DO NOT re-execute this command to change retrieval precedence.

Archive/VE Release Criteria File

To archive or release files, you must specify the criteria by which files must be archived or released. There are two ways to specify the archive and release criteria:

- Create an archive/release criteria file. The values you specify in this file are used as defaults during ARCHIVE_PERMANENT_FILES and RELEASE_MASS_STORAGE utility sessions.
- Use the CHANGE_COPIES_NEEDED subcommand during ARCHIVE_PERMANENT_FILES and RELEASE_MASS_STORAGE utility sessions.

The first method is preferrable to the second because it ensures that you use the same values on both the archive and release file utility commands and it also allows users to release files.

The chapters in the NOS/VE File Archiving manual (60463944) relating to the ARCHIVE_PERMANENT_FILE and RELEASE_MASS_STORAGE utilities describe the ARCHIVE_RELEASE_CRITERIA file which may be created at a terminal with the editor. Please note that the user that edits $SYSTEM.ARCHIVE_VE.ARCHIVE_RELEASE_CRITERIA must have (ALL,CYCLE,CONTROL) permits on that file.

Place the following command in the ARCHIVE_RELEASE_CRITERIA file if you wish to require that two copies of the permanent file cycle data be archived before the file can be released.

```
PROCESSOR=processor COPIES=2
```

Replace processor with the name of the processor you are using for your achive medium.

The following commands must be entered to create the proper permits to this file:

```
CREATE_FILE_PERMIT $SYSTEM.ARCHIVE_VE.ARCHIVE_RELEASE_CRITERIA ..
  GROUP=PUBLIC AM=(READ EXECUTE) SM=(READ EXECUTE)
```

Archive/VE Processor Job Activation Files

After the Archive/VE product has been loaded from the release tapes, the production copies of the Archive/VE processor job activation files must be created.

The processors that will be available to you depend upon the production copies of the Archive/VE processor job activation files that you create.

If you wish to use the pre-defined Archive/VE processors, you must copy the appropriate processor job activation files to the PROCESSOR_JOBS subcatalog. The procedure COPY_PROCESSOR_JOB_FILES will help you do this.

The following commands copy the job activation files for the concurrent version of magnetic tape processors introduced at NOS/VE 1.7.1 L803. Enter the following commands at the system console to execute the copy procedure:

```
CREATE_INSTALLATION_ENVIRONMENT
  COPY_PROCESSOR_JOB_FILES P=(list_of_processors)
  QUIT
```

Replace list_of_processors with either the keyword ALL to copy all the processor job files into the PROCESSOR_JOBS catalog, or one or more of the following keywords:

ARCHIVE_TO_NOS	If you plan to use NOS-7990 as an archival medium.
CARTRIDGE_STORAGE_SYSTEM	If you plan to use Cartridge System/VE as an archival medium.
CARTRIDGE_TAPE	If you plan to use cartridge tape as an archival medium.
CARTRIDGE_TAPE_RMS	If you plan to use cartridge tape with RMS as an archival medium.
CLUSTERED_MAINFRAMES	If you plan to use Archive/VE in a cluster mainframe environment.
MAG_TAPE	If you plan to use magnetic tape as an archival medium.
MAG_TAPE_RMS	If you plan to use magnetic tape with RMS as an archival medium.
PSEUDO_TAPE	If you plan to use pseudo tape as an archival medium for testing purposes.

The production copies of the job activation files may now be modified to meet your operational requirements. Refer to the NOS/VE File Archiving manual (60463944) for more information.

Archive/VE Site-Defined Processor Job Activation Files

After the Archive/VE product has been loaded from the release tapes, the production copies of the Archive/VE processor job activation files must be created.

The processors that will be available to you depend upon the production copies of the Archive/VE processor job activation files that you create.

If you wish to define your own Archive/VE processors, you should copy the most appropriate processor job activation files to the PROCESSOR_JOBS subcatalog, and then edit the production copies to meet your requirements.

A list of items that sites may want to change, and the action needed to make the change follow:

- To change the user job name this processor job uses, change the variables ARV$PROCESSOR_JOB_IDENTIFIER and ARV$PROCESSOR_JOB_UNIQUE_NAME.
- To change the name of the processor job log file, change the variable ARV$ARCHIVE_VE_LOGFILE.
- To change the name of the library containing intercept procedures for the processor job, change the variable ARV$INTERCEPT_LIBRARY.
- To have the processor job copy the Backup Permanent File Utility listing to the Archive/VE logfile when an error is detected by BACPF, change the variable ARV$COPY_BACPF_LIST_IF_ERROR to TRUE.

Additional items that sites may want to change, and the action needed to make the change follow.

- To change the name of the processor this processor job creates and registers, change the variable ARV$PROCESSOR_LIST_CONTENTS.
- To have this processor job create and register additional processors, add new processor names to the list for variable ARV$PROCESSOR_LIST_CONTENTS.
- To change the timeout period for the idle helper jobs for the concurrent tape processor job, change the variable ARV$SUBPROCESSOR_TIME_OUT_MIN.
- To change the catalog used to contain the permanent files created by a pseudo tape processor job, change the variables ARV$PSEUDO_TAPE_CATALOG and ARV$MASS_STORAGE_CLASS.
- To change the attributes of the processors this processor job creates and registers, make the desired changes to the CHANGE_PROCESSOR_ATTRIBUTES and CHANGE_PROCESSOR_SCHEDULING_ATT subcommands issued in the

MANAGE_ARCHIVE_ACTIVITY section of the processor job activation file. These attributes specify intercept procedures and the degree of concurrency for tape processing.

Refer to the Archive/VE Basic Concepts chapter of the NOS/VE File Archiving Manual (60463944) and the processor job activation files for more information.

Archive/VE use with Removable Media Management System (RMS)

NOTE

RMS must be installed prior to executing the commands in this section. Refer to the Installation, Configuration, and Initialization chapter of the NOS/VE Removable Media Management System Usage manual (60463947).

Archive/VE tape processors write to tapes with a removable_media_group of ARCHIVE_VE.

If RMS is not being used, the removable_media_group is ignored.

If RMS is being used, the group ARCHIVE_VE should be created. An example of the commands needed to create such a group follows. (In this example, the RMS location 'tape_racks' already exists, and only two volumes are added to the group.)

```
sou/MANAGE_REMOVABLE_MEDIA
rm/CREATE_GROUP G=ARCHIVE_VE AVA=TRUE L=tape_racks R=REQUIRED
rm/CREATE_VOLUME EVSN=('arcfff','arcggg') G=ARCHIVE_VE AD=MT9$6250
rm/quit
sou/
```

Archiving Across Clustered Mainframes

At NOS/VE 1.7.1 L803, enhancements were made to Archive/VE to support archiving across mainframes. The processing required to handle archiving and retrieving files in a clustered configuration is handled internal to Archive/VE. The installation procedures needed when using Archive/VE to archive and retrieve files across clustered mainframes is described in the Clustered Mainframe Configurations chapter of the NOS/VE File Archiving manual (60463944). The steps described in the section Setting Up a Clustered Configuration must be performed in order to archive files across mainframes. You should also read the Overview and Archive/VE Basic Concepts and Set Up chapters of the NOS/VE File Archiving manual (60463944) prior to performing your installation.

Refer to the following manuals for information on these and other topics related to Archive/VE in a File Server environment:

- NOS/VE File Server for STORNET and ESM-II manual (60000190)
- NOS/VE File Archiving manual (60463944)

Archive/VE Option for 7990-NOS

The Archive/VE Option for 7990-NOS extends the capabilities of Archive/VE by including the CDC 7990, via NOS, as an additional archive media. NOS/VE data, once archived to NOS mass storage, is subsequently archived to and may be retrieved from the 7990 through the transparent use of the NOS Mass Storage Extended (MSE) subsystem. MSE is used to release NOS mass storage space of NOS files containing archived NOS/VE data, once the NOS files have been archived to the 7990. Data is transferred between NOS/VE and NOS via CDCNET or LCN.

- Prior to installing Archive/VE Option for 7990-NOS, MSE on NOS must be installed. Refer to the NOS Version 2 Installation handbook (60459320) for a complete description of these installation instructions.
- Special installation tasks for the Archive/VE product must be performed before the special installation tasks for the 7990-NOS option can be performed. Refer to page 3-4 for complete details on the initial installation of Archive/VE.
- CDCNET or LCN between NOS/VE and NOS with PTF must be installed before installing the 7990-NOS option. Refer to the NOS Version 2 Installation handbook (60459320) to perform these installation steps.
- Installing the 7990-NOS option requires tasks on both NOS and NOS/VE. It is recommended that the NOS installation steps in the Archive/VE Option for 7990-NOS Reference manual (60000445) be performed first. The tape included in your software shipment with a VSN of ARCNOS will be used during these NOS installation steps.

7990-NOS Option Installation Steps

1. From a NOS/VE terminal, use the command CONFIGURE_NOS_ARCHIVE to create the NOS configuration file. Refer to the Archive/VE Option for 7990-NOS Reference manual (60000445) for information on how to use this command.

NOTE

The following step assumes that you can transfer files between NOS and NOS/VE.

---

2. From a NOS/VE terminal, use MANAGE_REMOTE_FILES to copy the NOS configuration file to any NOS user name on the NOS default family having a user index below 377700.

```
MANAGE_REMOTE_FILES LOCATION=location FILE=$USER.file  ..
  DATA_DECLARATION=C6
    USER,user,password,family.
    DEFINE,file.
    **
```

   Replace location with one of the NOS 1-3 character LIDs specified during the execution of the CONFIGURE_NOS_ARCHIVE command in task 1 above.

   Replace file with the NOS configuration file name specified during the execution of the CONFIGURE_NOS_ARCHIVE command in task 1 above.

   Replace user, password, and family with the chosen NOS user, password and family where the NOS configuration file is being moved to.

3. From the NOS console, copy the NOS configuration file to user index 377760 of the default family and store it there as a direct access file. Enter the following commands from the NOS system console:

```
X.DIS.
USER,user,password.
ATTACH,C=configuration_file.
SUI=377760.
DEFINE,configuration_file.
REWIND,C,configuration_file.
COPY,C,configuration_file,V.
DROP.
```

   Replace user and password with the NOS user and password where the configuration file was stored in task 2 above. Replace configuration_file with the name specified for file in task 2 above.

4. From the NOS/VE console, copy the NOS configuration file from the file name under which it was created to $SYSTEM.ARCHIVE_VE.NOS_7990.ANF$NOS_CONFIGURATION.

```
COPY_FILE INPUT=$USER.file ..
  OUTPUT=$SYSTEM.ARCHIVE_VE.NOS_7990.ANF$NOS_CONFIGURATION
```

   Replace file with the NOS configuration file name specified during the execution of the CONFIGURE_NOS_ARCHIVE command in task 1 above.

5. From the NOS/VE console, define the LASTNOS file on NOS.

```
MANAGE_REMOTE_FILES LOCATION=location ..
  FILE=$SYSTEM.ARCHIVE_VE.NOS_7990.ANF$LAST_NOS_FILENAME ..
  DATA_DECLARATION=C6
    USER,user,password,family.
    DEFINE,LASTNOS.
    **
```

   Replace location with one of the NOS 1-3 character LIDs specified during the execution of the CONFIGURE_NOS_ARCHIVE command in task 1 above. Replace user, password, and family with the first NOS user, password, and family entered in the configuration file in task 1 above.

6. Create the production copy of the 7990-NOS job activation file by executing the following command:

```
CREATE_INSTALLATION_ENVIRONMENT
  COPY_PROCESSOR_JOB_FILES P=ARCHIVE_TO_NOS
  QUIT
```

7. From the NOS/VE console, use EDIT_FILE to change the following EXECUTE_TASK statement in the file $SYSTEM.ARCHIVE_VE.PROCESSOR_JOBS.ARF$ARCHIVE_TO_NOS, located toward the end of the file, which begins as follows:

```
EXECUTE_TASK SP=ANP$NOS_ARCHIVE_APPLICATION P='xxx yyy'
```

   Replace xxx yyy with the NOS/VE identifier and your NOS mainframe ID (for example, P='ADN M07'). These must be the same as those specified in the NOS configuration file that you created in task 1 on page 3-11. Refer to the Archive/VE Option for 7990-NOS Reference manual (60000445) for information on the NOS/VE identifier, the NOS mainframe ID, and the NOS configuration file.

8. Optionally, the job activation file $SYSTEM.ARCHIVE_VE.PROCESSOR_JOBS.ARF$ARCHIVE_TO_NOS may be modified for your site. Save these changes so they may be reapplied to upgraded releases of this file. Refer to the NOS/VE File Archiving manual (60463944) for more information.

9. From the NOS console, check that TRACKS is running on the first specified user name in the NOS configuration file. Also, from the NOS console, check that the SSMOVE procedure is running so that enough free NOS disk space is available. The processor ARCHIVE_TO_NOS will be activated upon execution of the ACTIVATE_ARCHIVE_VE command during deadstart.

Batch Input/Output (NOS/VE)

This section is only applicable if you are utilizing the NOS/VE network.

Batch printer output from NOS/VE through CDCNET is performed by the network applications Status and Control Facility (SCF/SCFS), Batch Transfer Facility (BTF), and Operator Station Utility (OPES). Batch card reader input is performed by the application Batch Transfer Facility Server (BTFS).

- The SCF, BTF, and BTFS applications must be defined on each host in a multi-host network so that each mainframe can perform batch input and output.
- OPES must be defined on each mainframe that will operate a batch input and output station.
- The SCFS application is required to be defined on one mainframe in the network, although it may be desirable to define it on every mainframe. If SCFS is defined on more than one mainframe in a network, unique names must be used for the control facility name, application name, and system task name of each Status and Control Facility (SCFS).

Installation of the batch input/output capability consists of two parts:

1. Defining the applications.
2. Activating the Batch I/O System applications.

Defining the Applications

If you intend to install SCFS on only one mainframe in a network, you may use the default value for the APPLICATION_NAME parameter of the DEFINE_SCFS command. If you are defining more than one copy of SCFS in a network, each copy of the application must have a unique application name; therefore, the default name may be used only once. The commands that follow define the applications for batch output with default parameters. If you cannot use the defaults, consult the NOS/VE Network Management manual (60463916) for details on the command parameters.

Enter the following commands from the system console:

```
MANAGE_APPLICATION_DEFINITIONS
  DEFINE_BTF
  DEFINE_OPES
  DEFINE_SCF
  DEFINE_SCFS AN=unique_application_name
  QUIT
```

The entry of a value for the AN parameter of DEFINE_SCFS is only required if you are defining the application on more than one host in a multi-host environment. If this is your situation, replace unique_application_name with a unique name for each mainframe where SCFS is being defined.

If your site is using batch card reader input or NTF, enter the commands below from the system console:

```
MANAGE_APPLICATION_DEFINITIONS
  DEFINE_BTFS FN=(names)
  QUIT
```

where names is a list of family names on the current mainframe that can be accessed via batch input.

Activating the Batch I/O Applications

The commands below activate the system applications associated with the batch I/O applications. Note that not every application has a corresponding batch output system task that requires activation. The commands are entered at the system console. Read the section on page 3-63 if you will be using the Network Transfer Facility (NTF).

```
ACTIVATE_SCF
ACTIVATE_SCFS AN=unique_application_name
```

The entry of a value for the AN parameter of ACTIVATE_SCFS is only required if you are defining the application on more than one host in a multi-host environment. If this is your situation, replace unique_application_name with the name that you previously specified on the DEFINE_SCFS command.

BTFS must be activated to have the batch input application function properly. If you executed the DEFINE_BTFS command above, you should also enter the following command:

```
ACTIVATE_BTFS
```

These commands should also be placed in the network activation epilog file ($SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG) for automatic activation across deadstarts. Refer to the site tailoring section in the SPMM/Vol2 for more information.

Batch Output Filters

The Batch Output Filters capability provides sites with the ability to pre-process queued files, in a customizable and device-dependent fashion, after selection but prior to actual printing. Batch Output Filters may modify, append, and validate output file data and attributes.

If your site wishes to implement Batch Output Filters, consult the Batch Output Filters appendix of the CDCNET Batch Device User guide (60463863).

Cartridge System/VE for 5744

The Cartridge System/VE for 5744 (CS/VE 5744) is an integrated hardware and software package that accesses a large-capacity, online, data storage device for Control Data CYBER 180 and CYBER 2000 computer systems. It provides a cost-effective method to archive and retrieve data and is a high-density alternative to conventional magnetic tape storage.

In order to use the Cartridge System/VE for 5744 cartridge library application, you must:

1. Configure the Cartridge System/VE for 5744 hardware for NOS/VE using Physical Configuration Utility (PCU) subcommands. Refer to the Cartridge System/VE for 5744 manual (60463928) for detailed instructions on configuring the hardware.

2. Install CDCNET or ensure that it is already installed. Refer to the CDCNET installation instructions in this chapter for information on installing CDCNET.

3. Install the Network File System (NFS) or ensure that it is already installed.

   Refer to the NFS installation instructions in this chapter for information on installing NFS.

4. Install Cartridge System/VE for 5744 using the standard NOS/VE utility INSTALL_SOFTWARE. The files for CS/VE for 5744 are placed in the catalog :$SYSTEM.$SYSTEM.CARTRIDGE_SYSTEM_5744.

5. Define the CS/VE 5744 cartridge library application using the MANAGE_APPLICATION_DEFINITION (MANAD) subcommand DEFINE_5744_INTERFACE.

6. Activate the jobs that make up the NFS product by entering ACTIVATE_IPC_APPLICATIONS at the system console.

7. To activate the CS/VE 5744 cartridge library application, enter the following command at the system console:

   ```
   ACTIVATE_CARTRIDGE_LIBRARY
   ```

   Refer to the Cartridge System/VE for 5744 manual (60463928) for information regarding additional parameters for this command.

   Access to the cartridge library should now be available.

Additional information regarding the installation and configuration of the Cartridge System/VE for 5744 is documented in the Cartridge System/VE for 5744 manual (60463928).

Cartridge System/VE for 7992

The Cartridge System/VE for 7992 (Cartridge Storage System) is an integrated hardware and software package that accesses a large-capacity, online, data storage device for Control Data CYBER 180 and CYBER 2000 computer systems. It provides a cost-effective method to archive and retrieve data and is a high-density alternative to conventional magnetic tape storage.

To complete the installation of this product, refer to the Installation chapter of the Cartridge System/VE for 7992 manual (60463927).

CDCNET (NOS/VE)

This section is only applicable if you are utilizing the NOS/VE network.

The CDCNET portion of the initial NOS/VE installation process (described in chapter 2) defines a single terminal that is used to configure the remainder of the CDCNET network. The configuration process involves modifying the files in the $SYSTEM.CDCNET.SITE_CONTROLLED catalog. Before you can modify these files from the configuration terminal, you must grant permission to the logged in user name to update either the entire catalog or individual files within the catalog. You must grant these permissions from the system console. For example:

```
CREATE_CATALOG_PERMIT C=$SYSTEM.CDCNET.SITE_CONTROLLED G=USER ..
  FN=family U=user AM=(ALL,CYCLE,CONTROL)
```

Replace family and user with the family name and user name that are used to log into the configuration terminal.

Information on defining the network configuration appears in the CDCNET Configuration guide (60461550). It contains information about other catalogs and files in the $SYSTEM.CDCNET catalog which you must have permission to access. For managing CDCNET files and catalogs, consult the chapters on CDCNET procedure and file name conventions and the chapter on site administration.

Because of the limited number of site users who must use CDCNET host commands, these commands are not included on the default command list. Users who must use any of the CDCNET host utilities or maintain CDCNET configuration procedures should add the following command to their user prolog:

```
CREATE_COMMAND_LIST_ENTRY ..
  E=$SYSTEM.CDCNET.VERSION_INDEPENDENT.COMMAND_LIBRARY
```

CDCNET Installation Notes

CDCNET software is stored in the $SYSTEM.CDCNET catalog in subcatalogs known as version catalogs. Version catalogs have a name of the form VERSION_vvvv where vvvv is a 4-digit hexadecimal number indicating the level of CDCNET. The release version level is 9999. A new version catalog is created whenever a new release or BCU for CDCNET is installed. There are two files which indicate which level of CDCNET software to use:

- The CDCNET exception list file $SYSTEM.CDCNET.SITE_CONTROLLED.EXCEPTION_LIST contains a DEFINE_BOOT_DEFAULTS command. The VERSION parameter specified on DEFINE_BOOT_DEFAULTS sets the default level of software to be loaded into all CDCNET device interfaces (DIs).

- The CDCNET version file $SYSTEM.CDCNET.VERSION_INDEPENDENT.CDCNET_VERSION contains a variable declaration which specifies the default version level for the CDCNET host utilities ANALYZE_CDCNET_DUMP (ANACD), MANAGE_CDCNET_CONFIGURATION (MANCC), and NETWORK_PERFORMANCE_ANALYZER (NPA).

The SET_VERSION_LEVEL (SETVL) command, documented in the CDCNET Commands Reference manual (60000414), is used to manipulate the version indicated by these two files. You must be granted explicit permission to update the files in the VERSION_INDEPENDENT catalog, just as for the SITE_CONTROLLED catalog.

Please note that not all CDCNET software files are stored under the various $SYSTEM.CDCNET.VERSION_vvvv catalogs. CDCNET software files that are version independent (that is, used by all versions of CDCNET software) are contained in the $SYSTEM.CDCNET.VERSION_INDEPENDENT catalog. The CDCNET catalog structure is documented in the CDCNET Configuration guide (60461550).

When you upgrade to a new release or install a correction package, INSTALL_SOFTWARE (INSS) automatically updates the default version level of the CDCNET host utilities to the new level. INSS also installs new copies of the files in the $SYSTEM.CDCNET.VERSION_INDEPENDENT catalog.

CDCNET Separate TIPs

A number of separate products collectively called CDCNET Separate products are available for use with CDCNET. Configuration information for these products is contained in the CDCNET Configuration guide (60461550). NOS/VE 1.7.1 L803 supports the following CDCNET separate products:

- BISYNC_3270_TIP
- CDCNET_NETWORK_VALIDATIONS (Part of the NETWORK_VALIDATIONS product)
- CDCNET_TP0_CONS
- HIGH_SPEED_HDLC
- MONITOR_TOOLS (Part of the REMOTE_LINE_MONITOR product)
- MODE4_TIP
- SERVICE_ACCESS_CONTROL
- TCP_IP_TIP (Part of the TCP_IP product)
- TERMINAL_PASSTHROUGH
- X25_TERMINAL_GATEWAY (X.3 PAD)
- X29_PAD_SERVER

C/VE

C/VE is the standalone version of the VX/VE C compiler. The standalone version of the C compiler must be installed separately from the VX/VE option if access to both the C compiler under VX/VE and the C compiler under NOS/VE is required.

Before installing C/VE, you must select a NOS/VE user name to be the C/VE administrator. If this user name is not yet defined, define it at this time.

Perform the following tasks to install C/VE:

1. Execute the following command from the system console:

```
$SYSTEM.C.INSTALL.C_INSTALLER_PROC CAFN=family CAUN=user
```

   where family and user are the family and user name of the C/VE administrator.

   The C/VE administrator is given READ, WRITE, EXECUTE, CYCLE, and CONTROL permission to the $SYSTEM.C catalog.

2. After the installation procedure is complete, log into NOS/VE using the C/VE administrator's user name and execute the following commands:

```
CHANGE_WORKING_CATALOG C=$USER
C I=$SYSTEM.C.INSTALL.HELLO_C B=HELLO_OBJ
EXECUTE_TASK F=HELLO_OBJ PV=Z
```

   The phrase 'hello, world' appears at the terminal signifying that installation is complete.

Desktop/VE (NOS/VE)

Installation of Desktop/VE requires the definition of a network application to perform server functions for the microcomputer, creation of CDCNET configuration file entries, and tailoring of the Desktop host utilities and tool boxes. The installation steps are described in the Desktop/VE Host Utilities manual (60463918).

NOTE

Sites with Desktop users should exercise caution when setting the terminal timeout validation limit. Desktop users typically do not use interactive I/O to communicate with NOS/VE. These user jobs may be detached if the timeout limit is set too low even though they are actively working on NOS/VE through the Desktop. Setting the terminal timeout to not less than two hours should prevent most Desktop user jobs from being detached.

DWB/VX

DWB/VX is the Documentor's Workbench software for VX/VE. It is an integrated set of tools for document production. VX/VE must be installed prior to installing DWB/VX. (VX/VE installation is described on page 3-89 of this IHB.)

Execute the following commands from the system console to install DWB/VX:

```
INSTALL_SOFTWARE
  INSTALL_PRODUCT PL=packing_list P=DWB_VX
  QUIT
```

Replace packing_list with the packing list parameter you entered on the SET_INSTALLATION_TAPE system core command in step 3 on page 2-11. If DWB/VX is being installed via the component order installation process (see chapter 9), the packing list parameter is the value you entered on the LOAD_PACKING_LIST subcommand described on page 9-1. The INSTALL_SOFTWARE utility causes a batch job to be submitted which installs DWB/VX.

File Server

Refer to the NOS/VE File Server for STORNET and ESM-II manual (60000190) for details on the configuration of the File Server product.

File Transfer, Access, and Management Service (FTAM/VE)

FTAM/VE is Control Data's implementation of the International Standards Organization (ISO) defined File Transfer, Access and Management service. FTAM/VE consists of two host programs, the FTAM/VE initiator and the FTAM/VE responder. The FTAM/VE initiator executes in the user's job and the FTAM/VE responder executes as a system job.

In order to use the FTAM/VE responder application, you must:

1. Activate the system job that runs the FTAM/VE responder.

   ```
   ACTIVATE_FTAM_RESPONDER TITLE='title' LOG_OPTION=keyword
   ```

   Replace title with a unique title. ACTIVATE_FTAM_RESPONDER will register the specified title. The user of FTAM/VE will specify a HOST when attempting to create a connection to a FTAM responder. The FTAM HOST and ACTIVATE_FTAM_RESPONDER title parameters must match exactly, since the parameters are case sensitive.

   Replace keyword with STARTUP_AND_EXECUTION only if you need to gather more information for problem resolution. This parameter defaults to STARTUP.

2. The ACTIVATE_FTAM_RESPONDER command should be placed in the $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG file for automatic activation across deadstarts.

Consult the NOS/VE Network Management manual (60463916) for documentation on this command and others affecting FTAM/VE activation and deactivation.

The FTAM/VE responder must have permissions to files in order to access them on behalf of a user. Refer to the FTAM/VE usage manual (60000455) for information regarding FTAM permit validations.

The FTAM/VE initiator requires no system task or job activation.

For examples of configurations in a multi vendor environment, refer to appendix A.

IM/BASISplus

Initiate the IM/BASISplus installation procedure after all the IM/BASISplus products have been successfully loaded from the product tapes.

Initiate the IM/BASISplus installation procedure by logging into the user name DMROOT (in the family you specified in step 15 on page 2-41) and enter:

```
$USER.RELL1.INSTALL
```

This command will issue the same prompting sequence as the predecessor product IM/DM. The following prompts will be displayed, some of which require a response:

```
** Step 1
Verifying that you are logged into DMROOT
```

No response is required.

```
** Step 2
Removing the previous DM commands
```

No response is required.

```
** Step 3
Creating catalog permits for the DMROOT master catalog
```

No response is required.

The following permits are created for the $USER catalog:

```
g=user am=(all,cycle,control) sm=none
g=family am=(read,execute) sm=(read,execute)
g=public am=(read,execute) sm=(read,execute)
```

```
** Step 4
Creating file permits
```

No response is required.

Ring attributes and file permits for the CYBIL support and command libraries are set to their required values. Necessary file permissions are also created to allow access to the CYBIL support and command libraries by all users.

** Step 5
Do you want to set the password in the job files (Y/N)?

Enter Y.

Enter the password for DMROOT when prompted.

This is used to set login information for the jobs which are submitted to initiate the kernel.

** Step 6
Adding the DM commands

No response is required.

This adds the DM commands to the command list for this installation job.

** Step 7
Updating DM program descriptions with current family/user names.
Updating family/user names in the vocabulary file

No response is required.

This step takes several minutes to complete and issues a message from DMVP when complete.

** Step 8
Do you want to set the Kernel job class (Y/N)?

The IM/BASISplus kernels run in the DM_KERNEL job class by default. If you respond with a Y to this prompt (because you want the kernels to run in a job class other than DM_KERNEL), you are prompted to enter a new job class. Enter the same name you used for the BASISP_SCHEDULING_CLASS parameter on page 2-39. DMCCF issues a completion message after updating the kernel job class.

** Step 9
Do you want to copy the new PROLOG to $USER.PROLOG? (Y/N)?

You can enter Y or N.

If a PROLOG file has not been generated for DMROOT, a simple one can be copied from the release catalog to the $USER catalog. The PROLOG file is executed every time a job executes from user name DMROOT.

NOTE

All IM/BASISplus users (including DMROOT) must have the following command in their user prolog:

```
:family.DMROOT.DM$COMMANDS
```

where family is the name you previously assigned as the IM/BASISplus family with the CHANGE_INSTALLATION_PATH subcommand of INSTALL_SOFTWARE. This provides access to all IM/BASISplus modules. The command is in the .DMROOT.RELL1.PROLOG file. The command should be the first command in the user prolog.

** Step 10
Do you want to copy the new DM$COMMANDS to $USER.DM$COMMANDS (Y/N)?

Enter Y.

This step copies the file DM$COMMANDS from the release subcatalog to $USER.

** Step 11
Should L1 be installed as the default release (Y/N)?

Enter Y.

This step installs the new release of IM/BASISplus as the default release by copying the file DMCMD_COM to the $USER catalog. This step concludes the installation of IM/BASISplus.

** Step 12
Do you want to start up the kernel (Y/N)?

Enter Y if you are installing or upgrading IM/Control after this step. The IM/Control installation process requires the kernel to be initiated. When you enter Y, the kernel is initiated by running DMSA and issuing the BEGIN command. The kernel is not initiated if you answer N.

IM/Control

IM/Control is an IM/BASISplus database application and is only available to sites having IM/BASISplus. A system with a minimum of 16 megabytes of central memory is required.

NOTE

IM/BASISplus level L1 must be installed and the IM/BASISplus L1 kernel must be active and executing before performing the tasks described below. If the kernel was not activated during IM/BASISplus installation (at the final step), contact your site IM/BASISplus administrator.

When the IM/Control product tape has been loaded, you must install the IM/Control databases as described in the process below. The process makes the IM/Control database files known and available to IM/BASISplus. IM/Control can not function until this procedure is completed.

Each IM/Control dictionary is a version of the IM/Control database created and maintained through IM/BASISplus. IM/Control can support up to 99 dictionaries per IM/BASISplus kernel. All IM/Control dictionaries must reside in the same NOS/VE user catalog. When creating and deleting dictionaries, you should be logged into the NOS/VE user name that owns the IM/Control database files. Creation of a dictionary results in four to six files being created in the database catalog.

Since all IM/Control dictionaries must reside in the same NOS/VE user catalog, it is recommended that they be installed in a NOS/VE user name that can be easily maintained. Do not install them in the $SYSTEM catalog.

Existing dictionaries can be accessed and updated from any NOS/VE user name that has been given appropriate permissions through IM/Control. These permissions are independent of NOS/VE. Refer to the IM/Control for NOS/VE Usage manual (60488913) for a description of these permissions and how they are defined.

Loading the IM/Control Databases

1. At the system console, create the MANIFEST_DM_LIBRARY file needed by the other IM/Control installation procedures and the IM/Control execution procedure:

```
CREATE_COMMAND_LIST_ENTRY E=$SYSTEM.CONTROL.COMMAND_LIBRARY
LOCATE_DM FAMILY=family DM_LEVEL=L1
DELETE_COMMAND_LIST_ENTRY E=$SYSTEM.CONTROL.COMMAND_LIBRARY
```

   Replace family with the same as the IM/BASISplus family you specified in step 15 on page 2-41.

2. To install the IM/Control database files, select a NOS/VE user name where you want the files to reside. Log into that user name from the configuration terminal and perform the following:

```
CREATE_COMMAND_LIST_ENTRY E=$SYSTEM.CONTROL.COMMAND_LIBRARY
RESTORE_CONTROL_DATABASE ..
  SYSTEM_ADMINISTRATOR_ID=system_administrator_id ..
  SYSTEM_ADMINISTRATOR_PW=system_administrator_pw  ..
  BACKUP_FILE=$SYSTEM.CONTROL.INITIAL_DATABASE ..
  TO_CATALOG=$USER.catalog_path
```

   Replace system_administrator_id and system_administrator_pw with a currently registered IM/BASISplus user that has IM/BASISplus system administrator privileges. When IM/BASISplus is installed, it creates one IM/BASISplus user with system administrator privileges. The user id and password created are SAUID and SAUPW. If you wish to create your own IM/BASISplus user with system administrator privileges, refer to the IM/DM Data Administration manual (60489014) for more information.

   Replace catalog_path with the NOS/VE user catalog where the IM/Control database files are to reside. If the specified catalog does not exist, it is generated by the procedure.

   The RESTORE_CONTROL_DATABASE procedure takes about 15 minutes to execute.

3. Verify that IM/Control is installed successfully with the following command:

```
VERIFY_CONTROL
DELETE_COMMAND_LIST_ENTRY E=$SYSTEM.CONTROL.COMMAND_LIBRARY
```

   The VERIFY_CONTROL procedure creates and deletes a dictionary and takes about ten minutes to execute.

IM/Fast

Perform the following steps at the system console or from the $SYSTEM account:

1. Add the IM/Fast command library to your command list.

```
CREATE_COMMAND_LIST_ENTRY  $SYSTEM.FAST.COMMAND_LIBRARY
```

2. Create the file TTF$APPLICATION_DIRECTORY in the $SYSTEM.FAST catalog by executing the following command:

```
CREATE_DIRECTORY  USER = user_name  FAMILY_NAME = family_name
```

   Replace user_name with the user name of the IM/Fast administrator. This parameter is required. Replace family_name with the name of the family associated with the IM/Fast administrator's account. If this parameter is omitted, it will be set to the default family.

3. Delete the IM/Fast command library from your command list.

```
DELETE_COMMAND_LIST_ENTRY  $SYSTEM.FAST.COMMAND_LIBRARY
```

4. Refer to the Preparing to Use IM/Fast and Installing and Using the $EXAMPLE Application chapters of the IM/Fast for NOS/VE Administration Usage manual (60487513) for details on the preparation of the IM/Fast product.

IM/Smart

IM/Smart is an IM/BASISplus application and is only available to sites having IM/BASISplus. Perform the following steps to complete the installation of IM/Smart.

1. Ensure that the following conditions exist:

   a. The IM/BASISplus product has been installed and the kernel has been activated.

   b. You do not have the following IM/BASISplus user ids registered in your IM/BASISplus Authority Database (ADB):

      - SADBA
      - SAUDMALL
      - SAUVALID
      - SAPUBLIC

   c. You do not have the following IM/BASISplus database names in your IM/BASISplus Authority Database:

      - IMSA739
      - IMSACME

2. Login to the user name where you want the IM/Smart database files and sample form libraries to reside. This may be any user name except $SYSTEM or DMROOT. Ensure that the catalog $USER.SMART does not exist.

3. Execute the IM/Smart installation procedure by entering:

```
CREATE_COMMAND_LIST_ENTRY E=$SYSTEM.SMART.COMMAND_LIBRARY
INSTALL_IMSMART SAUI=system_administrator_id ..
  SAUP=system_administrator_pw ..
  FQMUI=dmfqm_user_id ..
  FQMUP=dmfqm_user_pw
```

   Replace system_administrator_id and system_administrator_pw with a currently registered IM/BASISplus user id that has IM/BASISplus system administrator (SA) privilege.

   Replace dmfqm_user_id and dmfqm_user_pw with the user id and password which will be used by IM/Smart's DISPLAY_DICTIONARY_REPORT utility which uses DMFQM. Note that this user id need not be registered at the time the INSTALL_IMSMART procedure is executed.

   IM/BASISplus user ids and passwords may contain up to 8 characters.

   When IM/BASISplus is installed, it creates one IM/BASISplus user id with system administrator privileges. The user id and password created are SAUID and SAUPW. If you wish to create your own IM/BASISplus user id

with system administrator privileges, refer to the "register" command in the "DMSA" section of the IM/BASISplus System Administration for NOS/VE manual (publication 60487819) for more information.

The INSTALL_IMSMART procedure executes interactively. When the INSTALL_IMSMART procedure begins execution, you will be prompted with the following question:

```
Are you a new IM/Smart customer?
```

If you are installing IM/Smart for the first time at your site, answer 'Y' for yes. If any previous version of IM/Smart is currently installed at your site, you are performing an upgrade, not an initial install. You should answer 'Q' to quit, and proceed to the IM/Smart sections in the "Special Product UPGRADE Installation Tasks" chapter.

As INSTALL_IMSMART continues execution, it will make several calls to IM/BASISplus modules. You will see the calls and other informative messages as the procedure executes. Output will be written to $USER.SAF$INSTALL_LIST.

When the INSTALL_IMSMART procedure has completed execution, the file $catalog.SMART.COMMAND_LIBRARY will exist. The $catalog is the name of the master catalog where IM/Smart database files and sample form libraries reside. The procedure SAP$DISPLAY_DICTIONARY_REPORT3 is contained in this file. This procedure contains the correct dmfqm_user_id and dmfqm_user_pw as specified on the call to the INSTALL_IMSMART procedure.

4. To set up the dmfqm_user_id for the DISPLAY_DICTIONARY_REPORT utility, enter the DMSA module by typing the following command:

```
DMSA UID=system_administrator_id UPW=system_administrator_pw AIDS=NO
```

Use the system_administrator_id and system_administrator_pw that you used when you executed the INSTALL_IMSMART command.

The dmfqm_user_id does not need any signon privileges, but does need a large enough signon quota to accomodate the number of users who will be using DISPLAY_DICTIONARY_REPORT concurrently. If the dmfqm_user_id is already registered, type the following command to check that the signon quota is large enough for your site:

```
SHOW/USERS UID=dmfqm_user_id
```

If the dmfqm_user_id does not have a large enough signon quota, you may reregister it with a larger signon quota by typing the following command:

```
REREGISTER UID=dmfqm_user_id UPW=dmfqm_user_pw SIGNONQUOTA=511
```

If the dmfqm_user_id is not already registered, type in the following command to register the user id:

```
REGISTER UID=dmfqm_user_id UPW=dmfqm_user_pw SIGNONQUOTA=511
```

Now that the user id is registered with the proper signon quota, type in the following command to authorize it:

```
AUTHORIZE UID=dmfqm_user_id DB=IMSA739.FQMSA1 PRIV=(GET)
```

NOTE

The IM/Smart product database name is IMSA739. This name was assigned when IM/Smart was first released at level 739 and remains unchanged for NOS/VE 1.7.1 L803.

Then type in the following command to exit DMSA:

```
EXIT
```

5. For security purposes, you may want to delete file $SYSTEM.SMART.COMMAND_LIBRARY. The procedure INSTALL_IMSMART in this library contains all the IM/BASISplus user ids and passwords used by IM/Smart.

   You may also want to delete the files $SYSTEM.SMART.INITIAL_DATABASE and $SYSTEM.SMART.SAMPLE_SCREENS to free up disk space. These files are only used during the installation process and take up approximately 6 megabytes of space.

   Deletion of any of the above files must take place at the system console.

NOTE

To enable on-site upgrading of the IMSA739 database for existing customers, the automatic detection of modification to IMSA739's User Data Models has been disabled; therefore, it is your responsibility not to modify IMSA739's User Data Models. If these User Data Models are changed, no warning will be issued, and IM/Smart will not function correctly.

Updating Validations for IM/Smart's DISPLAY_DICTIONARY_REPORT

For security purposes, you may from time to time need to change the dmfqm_user_id and dmfqm_user_pw that are stored in the SAP$DISPLAY_DICTIONARY_REPORT3 procedure. This procedure resides in file $catalog.SMART.COMMAND_LIBRARY where $catalog is the master catalog where the IM/Smart database files and sample form libraries are installed. The following steps can be used to do this:

Login to the user name where the IM/Smart database files and sample form libraries are installed.

Execute the following commands:

```
CREATE_OBJECT_LIBRARY
    ADDM L=$USER.SMART.COMMAND_LIBRARY
    GENL L=$LOCAL.SAP$DISPLAY_DICTIONARY_REPORT3 FORMAT=SCL_PROC
    EDIT_FILE $LOCAL.SAP$DISPLAY_DICTIONARY_REPORT3
        Once you are in the editor, locate string "dmfqm uid=".
        Change the dmfqm_user_id and dmfqm_user_pw to the
        desired values, and quit the editor, saving the changes.
    ADDM L=$LOCAL.SAP$DISPLAY_DICTIONARY_REPORT3
    GENL L=$USER.SMART.COMMAND_LIBRARY.$NEXT
    QUIT
```

Before using the new $catalog.SMART.COMMAND_LIBRARY, you must unauthorize the old dmfqm_user_id and authorize the new dmfqm_user_id. To do this, you may enter DMSA and type in the following commands:

```
DMSA UID=system_administrator_id UPW=system_administrator_pw AIDS=NO
  UNAUTHORIZE UID=old_dmfqm_user_id DB=IMSA739.FQMSA1
  REGISTER UID=new_dmfqm_user_id UPW=new_dmfqm_user_pw SIGNONQUOTA=511
  AUTHORIZE UID=new_dmfqm_user_id DB=IMSA739.FQMSA1 PRIV=(GET)
  EXIT
```

Use the system_administrator_id and system_administrator_pw that you used when you executed INSTALL_IMSMART.

There is a file named $LOCAL.SAF$DISDR_DMFQM_OUTPUT which may be useful in the event of any problems with the DISPLAY_DICTIONARY_REPORT utility. This file contains a log of the DMFQM commands used to create the report and is available after each execution of the utility.

Mail/VE Version 2 (NOS/VE)

Mail/VE can be installed with either a single MTA per host or with multiple MTAs in a host. Follow the installation instructions in the section titled Installation if you wish to follow the standard Mail/VE installation. If you wish to install Mail/VE with Multiple MTAs, follow the instructions in the section titled Installation of Multiple MTAs. Perform these special installation tasks to install Mail/VE Version 2 and prepare it for use.

Installation

1. Determine the Mail/VE configuration.

   Refer to the Mail/VE Version 2 Administration manual (60464515) for additional information and examples.

2. Install Mail/VE Version 2.

   From the system console, enter the following:

   a. Add the Mail/VE Version 2 maintenance command library to the command list. (Please note that you may already have the file $SYSTEM.MAILVE_V2.MAINTENANCE.COMMAND_LIBRARY in your command list)

```
CREATE_COMMAND_LIST_ENTRY ..
  E=$SYSTEM.MAILVE_V2.MAINTENANCE.COMMAND_LIBRARY
```

   b. To execute INSTALL_MAIL, enter the following at the system console:

```
INSTALL_MAIL ..
  MTA='mta_name' PD='private_domain' ..
  AD='administrative_domain' C='country'
```

   All parameters are required except PRIVATE_DOMAIN. Refer to the Mail/VE Version 2 Administration manual (60464515) for additional information about selecting these parameter values.

   Replace mta_name with the name by which other hosts refer to this installation of Mail/VE. The name chosen should start with the three characters MTA and be unique among all interconnected systems. The MTA name may be up to 12 characters in length. The MTA name must be composed of numeric characters and upper-case alphabetic characters. No special characters are allowed.

   Replace private_domain with the name of the private domain which includes this installation of Mail/VE. The name can consist of 1 to 16 characters.

Replace administrative_domain with the name of the administrative domain to which this installation of Mail/VE is associated. The name can consist of 1 to 16 characters. If this installation of Mail/VE is not associated with an administrative domain, enter a single space as the value for the administrative domain.

Replace country with the code assigned to the country in which the site is located. Up to three characters are allowed. Refer to the Country Code appendix of the Mail/VE Version 2 Administration manual (60464515) for a list of country codes.

3. Activate Mail/VE Version 2.

The Mail/VE server takes letters out of the output and application queues and delivers them to mailboxes. Enter the following from the system console to bring up the server:

```
ACTIVATE_MAILVE  JC=job_class
```

Replace job_class with the name of the job class you wish to use for Mail/VE Server. The default value is the default batch job class of your site and need only be changed if your default batch job class has low priority.

The command ACTIVATE_MAILVE should be added to $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG so that the Mail/VE V2 server is automatically brought up with the network.

4. If you wish to exchange mail with Internet, BITNet/EARN, and other networks based on the RFC822 standard, follow the instructions in the section titled Installation of Mail/VE Gateway on page 3-40.

Installation of Mail/VE Gateway

In order to exchange mail with Internet, BITNet/EARN, and other networks based on the RFC822 standard, you must install the Mail/VE gateway. The following tasks describe preparation of a Domain Names file and installation of the Mail/VE gateway.

1. Create the domain names file.

   If you are a BITNet user, you may already have a Domain Names file on your NOS/VE or NOS system. You will need to add entries to the Domain Names file that define your local mail configuration, and that facilitate X.400/RFC822 address translation. Refer to the Mail/VE Version 2 Administration manual (60464515) for more information.

   If you do not have a Domain Names file, you must follow the process defined in the Mail/VE Version 2 Administration manual (60464515) to install the Mail/VE gateway with the basic set of Domain Names File entries. BITNet users may obtain the standard BITNet domain names file by sending a message to LISTSERV@BITNIC. The body of your message should include the single line:

   ```
   send DOMAIN NAMES
   ```

   We also recommend that you obtain a copy of the XMAILER NAMES file in the same way. LISTSERV@BITNIC will return copies of these files to your mailbox. You should copy the received messages to files named DOMAIN_NAMES_FILE and XMAILER_NAMES. Reformat and append XMAILER_NAMES to DOMAIN_NAMES_FILE by entering the following commands. (Please note that you may already have the file $SYSTEM.MAILVE_V2.MAINTENANCE.COMMAND_LIBRARY in your command list.)

   ```
   CREATE_COMMAND_LIST_ENTRY ..
     E=$SYSTEM.MAILVE_V2.MAINTENANCE.COMMAND_LIBRARY
   FORMAT_DOMAIN_NAMES LBNN=local_bitnet_node_name ..
     I=XMAILER_NAMES ..
     O=$SYSTEM.MAILVE_V2.DOMAIN_NAMES_FILE.$EOI
   ```

   Replace local_bitnet_node_name with the 1 to 8 character local BITNet node name specified on the INSTALL_MAIL_GATEWAY command.

   You must also add the Domain Names file entries that will define your local mail configuration and that will facilitate X.400/RFC822 address translation. Refer to Mail/VE Version 2 Administration manual (60464515).

   The following steps assume that the Domain Names file is defined with the file name $SYSTEM.MAILVE_V2.DOMAIN_NAMES_FILE. If you use another file name, you must specify the DOMAIN_NAMES_FILE parameter on the INSTALL_MAIL_GATEWAY command.

2. Install the Mail/VE Gateway.

   We recommend that you install the Mail/VE gateway on ONE system in your configuration. To do so, enter the following commands at a terminal logged into the Mail/VE administrator's user name. (Please note that you may already have the file $SYSTEM.MAILVE_V2.MAINTENANCE.COMMAND_LIBRARY in your command list.):

```
CREATE_COMMAND_LIST_ENTRY ..
  E=($SYSTEM.MAILVE_V2.MAINTENANCE.COMMAND_LIBRARY ..
  $SYSTEM.OSF$BUILTIN_LIBRARY)
INSTALL_MAIL_GATEWAY ..
  MGN='gateway_name' ..
  AD='administrative_domain' C='country'
```

   Replace gateway_name with a 1 to 12 character name by which other NOS/VE hosts refer to this installation of the Mail/VE gateway. The name chosen should start with the two characters MG and be unique among all interconnected NOS/VE systems. The Mail/VE gateway name must be composed of numeric and alphabetic characters. No special characters are allowed.

   Replace administrative_domain with a 1 to 16 character name of the administrative domain to which this installation of the Mail/VE gateway is associated. If this installation of the Mail/VE gateway is not associated with an administrative domain, enter a single space as the administrative domain.

   Replace country with the code assigned to the country in which the site is located. Up to three characters are allowed. Refer to the Country Code appendix of the Mail/VE Version 2 Administration manual (60464515) for a list of country codes.

   The parameters listed here are those that are required. There are other parameters that may be specified. Refer to the Mail/VE Version 2 Administration manual (60464515) for additional information about selecting these parameter values.

3. Activate the Mail/VE Gateway.

   Activate the Mail/VE gateway with the following command:

```
ACTIVATE_MAIL_GATEWAY JOB_CLASS=job_class
```

   Replace job_class with the name of the job class you wish to use for the Mail/VE gateway. The default value is the default batch job class of your system and need only be changed if your default batch job class has low priority. Control Data recommends that the job class priority be greater than Batch up to Interactive priority.

   The command ACTIVATE_MAIL_GATEWAY should be added to $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG so that the Mail/VE gateway is automatically brought up with the network.

4. Install SMTP and NTF.

   In order to exchange mail with the Internet, you must have SMTP properly installed on the host where you have installed the Mail/VE gateway. See section 3-82 for instructions on how to install SMTP.

NOTE

If you have used SMTP with other Mail Gateways, the DEFINE_SERVICE entry for SMTP in the $SYSTEM.TCP_IP.INETD_CONFIGURATION file may need to be changed. The DEFINE_SERVICE parameter parameter_string should have the value 'MDU=MG DMDU=MG'. See the INETD_CONFIGURATION file example in the Advanced Configuration Concepts section of the CDCNET Configuration guide (60461550).

   In order to exchange mail with BITNet, you must have NTF properly installed on the host where you have installed the Mail/VE gateway. See section 3-63 for instructions on how to install NTF.

Installation of Multiple MTAs

Multiple MTAs may be installed on a single host. This may be desirable or necessary where Mail/VE users of the same CYBER host belong to different private management domains, or are in different functional groups such as university students and staff. It should also be noted that public mailboxes cannot be shared across MTAs.

To install multiple MTAs on your system perform the following instructions.

1. Preparation.

   a. Determine administrative and private domain management and country title. This information should be provided by the remote administrative domain or private domain administrator.

   b. Chart the hosts, MTAs, transfer titles, and transfer services. Determine the paths. Describe the paths in terms of the destination, the type of service represented by the destination, the transfer service, and transfer title needed to send data to the destination.

   c. Refer to the Mail/VE Installation and Configuration chapter of the Mail/VE Version 2 Administration manual (60464515)for an example of Multiple MTA installation.

2. Install mail for each MTA on the host.

```
CREATE_COMMAND_LIST_ENTRY ..
  E=$SYSTEM.MAILVE_V2.MAINTENANCE.COMMAND_LIBRARY
INSTALL_MAIL ..
  MTA='mta_name' PD='private_domain' ..
  AD='administrative_domain' C='country'
  DEFAULT_MTA=boolean
```

   All parameters are required except PRIVATE_DOMAIN. Refer to the Mail/VE Version 2 Administration manual (60464515) for additional information about selecting these parameter values.

   Replace mta_name with the name by which other hosts refer to this installation of Mail/VE. The name chosen should start with the three characters MTA and be unique among all interconnected systems. The MTA name may be up to 12 characters in length. The MTA name must be composed of numeric characters and upper-case alphabetic characters. No special characters are allowed.

   Replace private_domain with the name of the private domain which includes this installation of Mail/VE. The name can consist of 1 to 16 characters.

Replace administrative_domain with the name of the administrative domain to which this installation of Mail/VE is associated. The name can consist of 1 to 16 characters. If this installation of Mail/VE is not associated with an administrative domain, enter a single space as the value for the administrative domain.

Replace country with the code assigned to the country in which the site is located. Up to three characters are allowed. Refer to the Country Code appendix of the Mail/VE Version 2 Administration manual (60464515) for a list of country codes.

Replace boolean with TRUE for your default MTA and with FALSE for all additional MTAs defined on the host. It is necessary to install the default MTA first.

3. Create route and organization information for each path in the network. Repeat this step for EACH MTA defined in step 2.

   a. Use the CREATE_ROUTE command of the ADMINISTER_MAIL utility to enter route information for each path in the network.

```
ADMINISTER_MAIL MTA='mta_name'
  CREATE_ROUTE T='title' C='country' AD='administrative_domain'
..
    PD='private_domain' TS=transfer_service DT=destination_type
..
    TT='transfer_title'
  QUIT
```

   Replace mta_name with the name of the MTA for which you are creating a route.

   Replace title with the name that identifies that message handling system or MTA name. The title may also be the name of a foreign message handling system that may be accessed by XTF.

   Replace country, administrative_domain, and private_domain with the appropriate values for that route.

   Replace transfer_service with the queue application to use in routing mail to the destination service or LOCAL if the application resides on this NOS/VE host. Queue applications may be QTF or XTF.

   Replace destination_type with the name of the service to receive the mail. Destination types include MVE (the default MTA on a host) and MG as well as named Mail/VE MTAs.

   Replace transfer_title with the name registered by QTFS that identifies the next hop on a NOS/VE inter-host path to the destination message handling system.

b. Use the CREATE_ORGANIZATION command of the ADMINISTER_MAIL utility to enter organization information.

```
ADMINISTER_MAIL MTA='mta_name'
  CREATE_ORGANIZATION ON='organization_name' ..
    OU='organization_unit' T='title'
  QUIT
```

Replace mta_name with the name of the MTA for which you are creating organization information.

Replace organization_name and organization_unit with the organization name and organization unit you wish to define for the MTA.

Replace title with the name that identifies that message handling system or MTA name. The title may also be the name of a foreign message handling system that may be accessed by XTF.

4. Add mailve_domains validation to the user validations. The mailve_domains validation is a user-defined validation field. It consists of a list of one or more names. The first name in the list is the name of the user's default MTA. The remaining names in the list are other MTAs the user is allowed to use. Execute the following commands to add the mailve_domains to the user validations file.

```
ADMINISTER_VALIDATIONS
  USE_VALIDATION_FILE VF=validation_file ..
    PW=password
MANAGE_USER_FIELDS
    CREATE_NAME_FIELDS FN=MAILVE_DOMAINS ..
      D='list_of_mtas'
    QUIT
  FOR EACH USER IN $USER_LIST DO
    CHANGE_USER USER
      CHANGE_MAILVE_DOMAINS VALUE=mtaname
    END_CHANGE_USER
    FOREND
  QUIT
```

Replace validation_file with name of the validation file for your site. Replace password with the password of your validations file. Replace list_of_mtas with the description of your site's mtas. Replace mtaname with the default MTA for the set of users you are defining.

NOTE

Control Data recommends that you set the CREATE_NAME_FIELD parameter NON (number_of_names) to the default of 1. If you change this default, the CHANGE_MAILVE_DOMAINS command will have the parameter ADD rather than the parameter VALUE.

---

5. Activate Mail/VE V2 for each MTA defined on the host. Execute the following command once for each MTA being activated:

```
ACTIVATE_MAILVE MTA='mta_name' JC=job_class
```

   Replace mta_name with the name of one of your MTA.

   Replace job_class with the name of the job class you wish to use for the Mail/VE gateway. The default value is the default batch job class of your system and need only be changed if your default batch job class has low priority. Control Data recommends that the job class priority be greater than Batch up to Interactive priority.

6. Update the file $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG with the additional activate commands entered in the previous step.

Mail/VE Version 2 Configuration

Before using Mail/VE Version 2, it must be configured with routes, organizations, and users. If your site is using the X.400 Transfer Facility (XTF), the XTF configuration file must be installed using the INSTALL_X400_TRANSFER_FACILITY command before Mail/VE is configured. Refer to the Mail/VE Version 2 Administration manual (60464515) for information about configuring Mail/VE routes, organizations, and users. You must complete Mail/VE configuration prior to entering the ACTIVATE_XTF command. Refer to page 3-93 in this chapter describing the installation tasks for the XTF product.

If you have installed the Mail/VE gateway, you must define the default Mail/VE gateway address on the host where it is installed and on every other NOS/VE host in your configuration. You must also create an organization entry and route entry to define the transfer to the Mail/VE gateway on the system. The following tasks must be performed to define a configuration that includes the Mail/VE gateway:

1. Define the Mail/VE gateway on the host where it is installed.

   On the host where the Mail/VE gateway is installed, enter the following commands from a terminal logged into the mail administrator user name:

```
ADMINISTER_MAIL
  DEFINE_DEFAULT_GATEWAY_ADDRESS ..
    AD='administrative_domain' C='country'
  CREATE_ROUTE T='gateway_name' ..
    C='country' AD='administrative_domain' ..
    TS=LOCAL DT=MG
  CREATE_ORGANIZATION T='gateway_name'
  QUIT
```

   Replace administrative_domain , country ,and gateway_name with the same values you used on the INSTALL_MAIL_GATEWAY command. If you used other address parameters on the INSTALL_MAIL_GATEWAY command (for example,

private_domain, organization_units, or organization_name) you will need to supply those values here also. Refer to the Mail/VE Version 2 Administration manual (60464515) for more information on these commands and their parameters.

2. Define the Mail/VE gateway on hosts where it is not installed.

   On all hosts where the Mail/VE gateway is not installed, you will need to define the default Mail/VE gateway address and create an organization entry and route entry to define file transfer from the local system to the system where the Mail/VE gateway is installed. To do so, enter the following commands from a terminal logged into the mail administrator user name:

```
ADMINISTER_MAIL
  DEFINE_DEFAULT_GATEWAY_ADDRESS ..
    AD='administrative_domain' C='country'
  CREATE_ROUTE T='gateway_name' ..
    C='country' AD='administrative_domain' ..
    TS=QTF DT=MG TT='qtf_title'
  CREATE_ORGANIZATION T='gateway_name'
  QUIT
```

   Replace administrative_domain, country, and gateway_name with the same values you used on the INSTALL_MAIL_GATEWAY command.

   Replace qtf_title with the registered QTF title of the mainframe where the Mail/VE gateway is installed.

   If you used other address parameters on the INSTALL_MAIL_GATEWAY command (for example, private_domain, organization_units, or organization_name) you will need to supply those values here also. Refer to the Mail/VE Version 2 Administration manual (60464515) for more information on these commands and their parameters.

Network Archiving

Installing Network Archiving on the Server

Perform the following steps to complete the installation of Network Archiving on the server mainframe.

1. Install Archive/VE or ensure that it is already installed. Refer to the installation instructions on page 3-4 for information on installing Archive/VE.

2. Install TCP/IP or ensure that it is already installed. Refer to the installation instructions on page 3-82 for information on installing TCP/IP.

3. Install NFS or ensure that it is already installed. Refer to the installation instructions on page 3-55 for information on installing NFS.

4. Ensure that the job class named network_archiving has been created. To create this job class, execute the following commands from the system console:

```
CREATE_INSTALLATION_ENVIRONMENT
  CREATE_SCHEDULING_CLASS O=NETARC
  QUIT
```

5. Load the packing list by entering the following commands from the system console:

   To load the packing list, you must give it a name. Choose a name which reflects the contents of the tape and is distinguishable from other packing list names.

   From the system console, enter the following commands to load the packing list and display the contents:

```
INSTALL_SOFTWARE
  LOAD_PACKING_LIST PL=packing_list EVSN='evsn' T=type
  DISPLAY_PACKING_LIST PL=packing_list
  QUIT
```

   Replace packing_list with any 1- to 16-character SCL name for the packing list file name.

   Replace evsn with the 1- to 6-character external VSN of the product tape. The VSN for the tape can be found in the media number field of the external tape label.

Replace type with one of the following keyword values:

MT9$6250	(for 9-track tape at 6250 cpi)
MT9$1600	(for 9-track tape at 1600 cpi)
MT18$38000	(for cartridge tape)

6. Install the Network Archiving files by entering the following commands from the system console:

```
INSTALL_SOFTWARE
  INSTALL_PRODUCT PL=packing_list P=NETWORK_ARCHIVING
  QUIT
```

   Replace packing_list with the packing list parameter you specified in the previous step. The INSTALL_SOFTWARE utility causes a batch job to be submitted which installs the Network Archiving files.

7. If you wish to tailor Network Archiving for your site, you should modify the file $SYSTEM.ETC.NETARC_CONFIG. Refer to the Administering Network Archiving section of the NOS/VE File Archiving manual (60463944) for documentation on tailoring the server environment and on managing disk space on the server.

8. Create NOS/VE user catalogs for archive storage. Consult the Administering Network Archiving section of the NOS/VE File Archiving manual (60463944) for instructions on validating clients and users.

9. Map workstation users to the NOS/VE catalogs by adding directives to the NFS exports file. These directives can be validated with the VALIDATE_EXPORTS_FILE command from an interactive terminal. The interactive user must have system administration privileges.

   Log into the user name you have selected and execute the following commands to validate the directives in your NFS exports file.

```
SYSTEM_OPERATOR_UTILITY C=SYSTEM_ADMINISTRATION
  CREATE_COMMAND_LIST_ENTRY E=$SYSTEM.TCP_IP.NETARC.COMMAND_LIBRARY
  VALIDATE_EXPORTS_FILE
  QUIT
```

   Refer to the Administering Network Archiving section of the NOS/VE File Archiving manual (60463944) for information on the VALIDATE_EXPORTS_FILE command.

10. To activate the NETARC server, enter the following command at the system console:

```
ACTIVATE_NETWORK_ARCHIVING CF=configuration_file
```

    Replace configuration_file with the name of your configuration file for network archiving. This parameter defaults to the file $SYSTEM.ETC.NETARC_CONFIG

    This command should also be placed in the file $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG for automatic activation across deadstarts.

NOTE

The ACTIVATE_NETWORK_ARCHIVING command must be placed after the command that activates NFS (ACTIVATE_IPC_APPLICATIONS). If network archiving is activated prior to NFS, the Network Archiving activation will abort.

Installing Network Archiving on the Client

Perform the following steps to complete the installation of Network Archiving on the client SUN workstation.

NOTE

The following instructions apply to the installation of Network Archiving on the SUN workstation only. CD4000 instructions are provided separately.

---

1. Installing the Network Archiving Client software on the workstation requires approximately 2 megabytes of disk space in the directory where you plan to install the software. You will also need the same amount of space in a temporary directory that can be used to retrieve the software from the release tape. During the operation of the Network Archiving Client software, the directory containing the client database can grow to two megabytes or greater.

    Decide where you want the temporary directory to reside and then issue a 'df' command to ensure that there is at least 2000 Kbytes of available space in the selected directory. You also need to ensure that there is enough space in the directory you are going to install the software. The default is /usr.

2. Login to the workstation as 'root' and issue the 'cd' command to make your current working directory the temporary directory that you will use to install the software.

3. The release tape is a QIC-24 formatted tape so you need a compatible 1/4 inch cartridge tape drive. On a SUN workstation, this is normally /dev/rst8, but you should check with your local system administrator if you are not sure. To retrieve the contents of the release tape, issue the following command:

```
tar xvf /dev/rst8
```

4. Issue the following command to install the software:

```
inst.script
```

   The first thing the installation script does is to ensure that you have all the files included in the Network Archiving Client package. If any files are missing, you either have a bad tape or you did not have enough disk space in the partition you choose to use for temporary work space. You must correct his condition before continuing the installation process.

   When all files are present the script will continue on and start asking you questions. The default directory as released is:

```
[/usr/local/netarc]
```

   The following is a list of the questions asked with the default answer for each question shown enclosed in square brackets.

   - Where shall I put the Executables? [/usr/local/netarc]

     If this is not the directory you want to use, you must specify the full pathname of the correct directory. If the directory does not exist the installation process will ask the following question:

     Directory [specified pathname] does not exist. Shall I create it? [y]

     If you do not answer yes or y, the process will terminate and you will have to create the required directory manually.

     If you specify a pathname other than /usr/local/netarc, the path specified will become the new default pathname for the a majority of the remaining questions.

- Where shall I put the Database? [/usr/local/netarc/db]

  If this is not the directory you want to use, you must specify the full pathname of the correct directory. If the directory does not exist the installation process will ask the following question:

  Directory [specified pathname] does not exist. Shall I create it? [y]

  If you do not answer yes or y, the process will terminate and you will have to create the required directory manually.

- Where shall I put the Error Message Description Files? [/usr/local/netarc]

  If this is not the directory you want to use, you must specify the full pathname of the correct directory. If the directory does not exist the installation process will ask the following question:

  Directory [specified pathname] does not exist. Shall I create it? [y]

  If you do not answer yes or y, the process will terminate and you will have to create the required directory manually.

- Where shall I put the Archive Scripts? [/usr/local/netarc/scripts]

  If this is not the directory you want to use, you must specify the full pathname of the correct directory. If the directory does not exist the installation process will ask the following question:

  Directory [specified pathname] does not exist. Shall I create it? [y]

  If you do not answer yes or y, the process will terminate and you will have to create the required directory manually.

- Where shall I put the Example User Full/Partial Backup and Retrieve Scripts? [current working directory]

  It is recommended that these scripts be installed in a directory that is only accessible to the system administrator. These are used to do full and partial backups of a workstation. The retrieval script will also be placed in the specified directory.

- Where shall I put the User Command Man Pages? [/usr/local/man/man1]

  If this is not the directory you want to use, you must specify the full pathname of the correct directory. If the directory does not exist the installation process will ask the following question:

  Directory [specified pathname] does not exist. Shall I create it? [y]

  If you do not answer yes or y, the process will terminate and you will have to create the required directory manually.

- Where shall I put the Administrative Man Pages? [/usr/local/man/man8]

  If this is not the directory you want to use, you must specify the full pathname of the correct directory. If the directory does not exist the installation process will ask the following question:

  Directory [specified pathname] does not exist. Shall I create it? [y]

  If you do not answer yes or y, the process will terminate and you will have to create the required directory manually.

- What service number is the Network Archiving Daemon to run under? [0x50000001L]

  This number should not have to be changed unless it is already being used by another process in your network.

- What service number is the Network Archiving Server to run under? [0x50000002L]

  This number should not have to be changed unless it is already being used by another process in your network.

- What version number is the Network Archiving Server to run under? [1]

  This number should not have to be changed unless you are running two versions of the Network Archiving software at the same time.

After all the questions have been answered, the installation script will move all the files to the specified locations.

The /.netarc file, which contains the paths of the various directories and the service numbers and versions, will then be created. This file is read by the Network Archiving Client software during execution to reconfigure.

5. After the installation script has completed successfully, you need to make the following modification to the /etc/rc.local file to enable automatic startup of the Network Archiving Client software.

```
if [ -f /usr/local/netarc/arcdaemon]; then
   /usr/local/netarc/arcdaemon HOST & (echo -n ' arcdaemon') >
   /dev/console
fi
```

Replace HOST with the name of the CYBER NOS/VE system where the Network Archiving server will be executing. If you did not use the default pathname of /usr/local/netarc for the Network Archiving Client software, you will need to furnish the correct pathname in the modifications to your /etc/rc.local.

6. You can now start Network Archiving Client software on the workstation by rebooting or by manually entering the following command:

```
/usr/local/netarc/arcdaemon HOST
```

Replace HOST with the name of the CYBER NOS/VE system where the Network Archiving server will be executing and also the correct pathname to the Network Archiving Client software if they are not in /usr/local/netarc.

If you initiate the Network Archiving Client software manually, you must logout or exit the window for all Network Archiving Client scripts to operate correctly.

If you decide to allow users to run the backup, archive, and retrieve commands on their own directories and files, you will need to publish the pathname for your executable binaries so that each user can add the path to their login sequence.

Network File System (NFS)

The Network File System for NOS/VE (NFS/VE) consists of three host programs: NFS, PCNFSD, and PORTMAPPER. These programs run as three jobs. The NFS job uses the job class of NFS which runs at priority P9. The PCNFSD job and the PORTMAPPER job use the job class PORTMAP_PCNFS which runs at priority P6. NFS requires the TCP/IP communications device to be running in a CDCNET MDI or ICA with both TCP and UDP protocols.

In order to use the NFS application, you must:

1. Update CDCNET DI configuration files and create the TCP/IP host file. For information on these configuration files, consult the NOS/VE Network Management manual (60463916).

2. Create the EXPORTS and PASSWD files. For information on these files, consult the NFS/VE chapter of the CDCNET TCP/IP Program Interfaces and Applications manual (60000214).

3. Ensure that the NFS scheduling classes have been created. (You should have created the classes during step 14 on page 2-39.)

4. To use PCNFS a spool catalog must exist where subcatalogs can be created for each PC that will be using the PCNFS print feature.

   a. Create the spool catalog.

      ```
      CREATE_CATALOG C=:family.unfsve.SPOOL
      ```

      Replace family with the name of the family you wish to use the PCNFS print feature on and replace unfsve with the user name you wish to use the PCNFS print feature from.

NOTE

The user, :family.unfsve, must exist before the catalog can be created.

---

   b. Add an entry /family/unfsve/spool/pc_host_name in the exports file.

      Replace pc_host_name with the host name of the PC in the "hosts" file.

      Repeat this step for each PC that will be using the PCNFS print feature.

5. To activate the jobs that make up the NFS product, enter the following command at the system console:

```
ACTIVATE_IPC_APPLICATIONS FAMILY=family ..
  SPOOL_CATALOG=:family.unfsve.SPOOL DEBUG=boolean
```

   Replace family and unfsve with the family and user name on which the user name and password supplied by the personal computer is validated. This parameter must be specified if the PCNFSD job is to be started. Replace boolean with either TRUE or FALSE. Set DEBUG to TRUE to gather more information on a problem with NFS. The default is FALSE.

The ACTIVATE_IPC_APPLICATIONS command must be placed in the $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG file for automatic activation across deadstarts. Remember to include the family parameter on ACTIVATE_IPC_APPLICATIONS if you want to use PCNFS.

Consult the NOS/VE Network Management manual (60463916) for documentation on the ACTIVATE command.

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Network Information Service (NIS/VE)

Network Information Service for NOS/VE (NIS/VE) consistes of four host programs and a utility named MANAGE_YELLOW_PAGES (MANYP). The utility is used by the administrator to manage NIS/VE maps and by users to interogate the maps. NIS/VE requires the TCP/IP communications device to be running in a CDCNET MDI or ICA with both TCP and UDP protocols.

In order to use the NIS/VE application, you must:

1. Ensure that the NFS scheduling class has been created. (You should have created this during step 14 on page 2-39.)

2. Ensure that the host is configured to run the TCP/IP communications device support software. (This was done during step 7 on page 2-19.)

3. Configure the TCP/IP communications device in a CDCNET MDI. For information on this task, refer to chapters 4 and 5 of the CDCNET Configuration guide (60461550).

4. Create the domains and their maps that you want NIS/VE to service and make available for users. For more information on this task, consult the Network Information Service/VE chapter of the CDCNET TCP/IP Applications manual (60000214). Please note that when issuing the command CREATE_YELLOW_PAGES_FILES, you must specify PROPAGATE=FALSE.

5. Activate the Portmap and YPSERV Daemons by executing the following commands:

```
ACTIVATE_PORTMAP
ACTIVATE_YPSERV
```

6. Activate the YPBIND Daemon by executing the following command:

```
ACTIVATE_YPBIND DEFAULT_DOMAIN=domain_name ..
  SERVER_IP_ADDRESS=server_ip_address
```

   Replace domain_name with the domain name the NIS/VE commands will use if a domain name is not specified. Replace server_ip_address with the IP address of the host where the server is running.

7. Activate the YPPASSWD and YPUPDATE Daemons by executing the following commands:

```
ACTIVATE_YPPASSWDD
ACTIVATE_YPUPDATED
```

8. If you wish to run NFS/VE and NIS/VE you can bring up NIS/VE as documented above, then use ACTIVATE_NFS and ACTIVATE_PCNFSD to start NFS and PCNFS.

The ACTIVATE commands should be placed in the $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG file for automatic activation across deadstarts.

For further information on the ACTIVATE commands, consult the NOS/VE Network Management manual (60463916).

Network Lock Manager (NLM/VE)

The Network Lock Manager for NOS/VE (NLM/VE) consists of two programs. Each runs as a job using the job class NFS which runs at priority P9.

In order to use the NLM/VE application, you must perform the following steps:

1. Install and activate NFS. Refer to page 3-55.

2. Activate NLM/VE by executing the following command:

```
ACTIVATE_PORTMAP
ACTIVATE_NLM
```

   For automatic activation of NLM/VE across deadstarts, the ACTIVATE_NLM command must be placed in the $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG file immediately following the commands to activate NFS (ACTIVATE_IPC_APPLICATIONS)

   For more information on the ACTIVATE command, refer to the NOS/VE Network Management manual (60463916).

Network Queuing System (NQS)

Perform the following steps to complete the installation of NQS.

1. If you have been running another implementation of NQS on this CYBER, it should be removed from the system before proceeding with this installation. This warning does not apply to prerelease or Beta Test versions of this implementation of NQS.

2. Define NQS as a service by executing the following commands at the system console:

```
CREATE_INSTALLATION_ENVIRONMENT
  INSTALL_NQS
    UPDATE_NETWORK_FILES PORT_NUMBER=port
  QUIT
QUIT
```

   Replace port with the TCP port number that NQS will use. All systems in your network that support NQS must use the same port number for this service. The default value for port number is 607, the value specified for NQS in RFC1060.

   Some systems that were released before RFC1060 was published may use a different port number. EP/IX is one such system. Refer to documentation for each system to determine how to change the NQS port number.

   In NOS/VE, the port number is defined in two text files by the command given above:

```
$SYSTEM.TCP_IP.SERVICES
$SYSTEM.TCP_IP.INETD_CONFIGURATION
```

   Both of these files can be modified with the text editor by a properly validated user.

3. Define NQS to CDCNET.

```
MANAGE_APPLICATION_DEFINITIONS
  DEFINE_NQS
QUIT
```

4. Three new validation fields must be defined for each user allowed to use NQS. They are:

NQS_QUEUE_NAME	Name of the default queue for the SUBMIT_NQS_JOB command if the user does not specify a queue name. It must be a string in the form 'queue@host'. If an empty string is specified, no default queue name will be defined.

UNIX_UID — The UNIX uid associated with each user. A user must have a non-zero value for this field to be validated for use of NQS on NOS/VE. If NQS on the UNIX system is configured to map the UID/machine_id combination to a local UID value, a unique UNIX_UID value must be assigned to each user.

UNIX_USER_NAME: — the user name associated with this NOS/VE user on all accessible UNIX systems. A user must have a non-empty string value for this field to be validated for use of NQS on NOS/VE. A value of '$translate' indicates that the user's NOS/VE user name should be mapped to lower case for use as the value for this field.

Add the new validation file fields and establish default values by executing the following commands at the system console:

```
CREATE_INSTALLATION_ENVIRONMENT
  INSTALL_NQS
    DEFINE_VALIDATION_FIELDS F=family ..
      DUUN=default_unix_user_name ..
      DQN=default_queue_name
  QUIT
QUIT
```

Replace family with the family name you are defining the validation fields for. Replace default_unix_user_name with the unix user name you wish to use as your default. The default_unix_user_name parameter may be given as the keyword value $translate to indicate that each user's NOS/VE user name should be mapped to lower case for use as the value for this field. If the keyword none is specified, no default UNIX user name will be specified.

Replace default_queue_name with the queue name you will use as your default. It must be a string in the form 'queue@host'. If an empty string is specified, no default queue name will be defined.

These new fields are defined as user fields in the validation file. The Administer_Validations subutility, Manage_user_fields, may be used to change attributes of these new fields. For instance, you may want to establish a non-zero default value for the UNIX_UID field so that all members of the family are authorized to use NQS (assuming a unique value for each user is not required).

5. Define the NQS host by executing the following commands from the system console:

```
CREATE_INSTALLATION_ENVIRONMENT
  INSTALL_NQS
    DEFINE_NQS_HOST MI=machine_id H=host
  QUIT
QUIT
```

Replace machine_id with the id of the mainframe you are defining as the NQS host. Replace host with the host name for this mainframe.

All systems that support NQS must be listed in the NQS host mapping file. This information is equivalent to the information maintained by the nmapmgr utility program on UNIX systems.

Define each system with a separate DEFINE_NQS_HOST command. The most commonly used name should be entered first, followed by the fully qualified name for each TCP/IP address belonging to the host. The first name listed is the one used in all NQS status displays and should be a short nickname commonly used to refer to the system. For example, a system called GRAY with three communication devices would be defined as follows:

```
DEFINE_NQS_HOST MI=5 H=(GRAY, CDC_GW.AHSE.CDC.COM, ..
      GREY.AHSE.CDC.COM, GRAYF.UDEV.CDC.COM)
```

6. Activate NQS by executing the following command:

```
ACTIVATE_NQS
```

This command should also be added to the $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG.

Network Transfer Facility (NTF)

This section is only applicable if you are utilizing the NOS/VE network.

The Network Transfer Facility (NTF) is a NOS/VE queue file application that manages the flow of queue files among a network of interconnected hosts. The Batch Input/Output applications must also be installed to use the NTF product. See the Batch Input/Output section on page 3-14 for more information on installing Batch Input/Output. File transfers between NOS/VE and NTF remote systems are performed by the network applications Network Transfer Facility (NTF), Status and Control Facility Server (SCFS), Batch Transfer Facility (BTF/BTFS), and Operator NTF utility (OPENTF).

The subproduct Dynamic Remote Job Entry is part of NTF, but is not automatically installed. Refer to the section titled Dynamic Remote Job Entry Installation for information on the installation of this subproduct.

- The NTF application must be defined on every NOS/VE host so that each mainframe can perform file transfers.
- OPENTF must be defined on each mainframe that will provide status and control functions for NTF.
- The Batch Input/Output applications (BTFS and BTF) must also be defined on every NOS/VE system that supports the exchange of queue files with NTF remote systems.
- The SCFS defined for NTF may also be used for Batch Input/Output operation.

Additional considerations are contained in the Network Transfer Facility Usage manual (60000628).

Installation of NTF consists of two parts:

1. Defining the applications

   Enter the following sequence of commands from the system console:

```
MANAGE_APPLICATION_DEFINITIONS
  DEFINE_NTF
  DEFINE_OPENTF
  QUIT
```

2. Activating the system tasks necessary for file transfers

   NTF requires the NTF_SYSTEM_LIST parameter be specified when SCFS is activated. The NTF system list must be created before activating SCFS. It consists of a file containing a list of directly connected system names (and optionally accessible remote system names) known to SCFS. Refer to the Network Transfer Facility Usage manual (60000628) for information on creating the NTF system list.

Accessible remote systems may be configured in either of two ways:

- in the NTF system list, supplied on the ACTIVATE_SCFS command, and in the CDCNET Terminal Definition Procedure (TDP) defined for NTF, or
- in the NTF nodes list, supplied on the ACTIVATE_NTF command, (and not in the NTF system list nor in the CDCNET TDP)

Directly connected system names must always be defined in the NTF system list.

To activate the NTF application, enter the following commands from the system console:

```
ACTIVATE_SCFS APPLICATION_NAME=name ..
  NTF_SYSTEM_LIST=ntf_system_list_file
ACTIVATE_NTF AUTOMATIC_STATION_NAME=name NODES_LIST=nodes_list_file
```

If you do not specify an application name on the ACTIVATE_SCFS command (see page 3-15), use the value STATION_CONTROLLER_1 on ACTIVATE_NTF. The NODES_LIST parameter is used only when accessible remote systems are configured using the second method) described above.

These commands should also be placed in the $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG file for automatic activation across deadstarts. Refer to the Site Tailoring chapter in the SPMM/Vol2 for more information.

Dynamic Remote Job Entry Installation

To install Dynamic Remote Job Entry (DRJE), perform the following steps:

1. The Dynamic Remote Job Entry subproduct was not loaded from the release tapes with the rest of NTF. As a result, it must be loaded now. From the system console, enter the following commands to load the DRJE subproduct:

```
INSTALL_SOFTWARE
  INSTALL_PRODUCT P=DRJE  PL=packing_list
  QUIT
```

Replace packing_list with the name specified for the packing list depending upon the type of installation being performed:

- If this is an initial installation, use the packing list name specified in step 16 on page 2-43.
- If this is a component installation, use the packing list name specified in step 2 on page 9-2.

- If this is a CYBER 93x initial installation, use the packing list name specified in the Installation Default Names and Permissions section on page 5-15.

2. Define the DRJE application by entering the following commands from the system console:

```
MANAGE_APPLICATION_DEFINITIONS
  DEFINE_DRJE
QUIT
```

3. Configure DRJE. Refer to the Dynamic Remote Job Entry Site chapter in the Network Transfer Facility Usage manual (60000628) for details and a sample configuration.

4. Activate DRJE by entering the following command:

```
ACTIVATE_DRJE
```

This command should also be placed in the $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG file for automatic activation across deadstarts. It should be placed after the ACTIVATE_SCFS command if SCFS runs on the same mainframe. The ACTIVATE_DRJE command is documented in the Dynamic Remote Job Entry Site Administration guide (SMD133115).

Network Validation

To install network validations, the following must be done for each domain which is desired:

1. Install an empty database by executing the following commands:

```
CREATE_COMMAND_LIST_ENTRY ..
  E=$SYSTEM.NETWORK_VALIDATION.COMMAND_LIBRARY
INSTALL_NETWORK_VALIDATIONS D=domain A=((administrator_records))
```

   Replace domain with the validation domain name.

   Replace administrator_records with the NOS/VE usernames and the corresponding family names of the administrators for this domain's network validation database. For example, A=((USER1,FAMILYA),(USER2,FAMILYB)).

2. Add entries to the database. Adding entries to the database is accomplished by using the ADMINISTER_NETWORK_VALIDATIONS utility. See the Network Validation Administration chapter of the NOS/VE Network Management manual (60463916) .

3. When the Independent File Access ME portion of NAM/VE is activated, (via the ACTIVATE_NETWORK_FILE_ACCESS command), VALIDATION must be included in the list of values supplied for the file_type parameter. Alternately, the value ALL may be specified. If network file access has already been activated, an informative message will be issued.

For more information on the above commands, refer to the Network Validation Administration chapter of the NOS/VE Network Management manual (60463916) .

Optical Storage System (NOS/VE)

In order to use the Optical Storage System, you must perform the steps in this section.

1. The Optical Storage System product was not loaded from the release tapes with the other products. As a result, it must be loaded now. From the system console, enter the following commands to load the Optical Storage System product:

```
INSTALL_SOFTWARE
  INSTALL_PRODUCT P=OPTICAL_DISK PL=packing_list
  QUIT
```

   Replace packing_list with the name specified for the packing list depending upon the type of installation being performed:

   - If this is an initial installation, use the packing list name specified in step 16 on page 2-43.
   - If this is a component installation, use the packing list name specified in step 2 on page 9-2.
   - If this is a CYBER 93x initial installation, use the packing list name specified in the Installation Default Names and Permissions section on page 5-15.

2. Define the optical storage hardware configuration. Refer to Installation Validation and Accounting chapter of the NOS/VE Optical Storage System manual (60463926) for details and a sample configuration.

3. If you have not previously created a new deadstart tape with the optical storage hardware configuration, you should do so now. Initialize a tape volume to be used for the new deadstart tape. Refer to the Magnetic Tape Usage chapter of the NOS/VE Operations manual (60463914) for details on labeling a tape. Create a new deadstart tape using the REPLACE_DS_TAPE_CONFIGURATIONS subcommand of the MAINTAIN_DEADSTART_SOFTWARE utility. Refer to the Deadstart File Software chapter of the SPMM/Vol2 for details on replacing the deadstart tape configurations. Use your configured NOS/VE 1.7.1 L803 deadstart tape as input to create the new deadstart tape with the optical storage hardware defined.

4. Provide for the execution of the Optical Storage System Executive. Enter the following command at the system console:

```
$SYSTEM.OPTICAL_DISK.EXECUTIVE
```

Add the above command to $SYSTEM.PROLOGS_AND_EPILOGS.SYSTEM_INITIATION_EPILOG for automatic initiation across deadstarts. This command executes the system job that loads and controls the optical storage device driver and processes global activities.

Set Up User Access

1. Set up the product for user access. If you wish to provide global user access to the Optical Storage System, add the following commands to $SYSTEM.PROLOGS_AND_EPILOGS.SYSTEM_PROLOG:

```
CREATE_COMMAND_LIST_ENTRY ..
  E=$SYSTEM.OPTICAL_DISK.ODF$COMMAND_LIBRARY ..
  STATUS=OSV$STATUS
SET_PROGRAM_ATTRIBUTES ..
  ADD_LIBRARY=$SYSTEM.OPTICAL_DISK.ODF$66D_LIBRARY
```

2. Access to the Optical Storage System is regulated by capabilities defined and controlled using the utility ADMINISTER_VALIDATION. Enter the following command from the family administrator user name to create the optical disk capabilities:

```
$SYSTEM.OPTICAL_DISK.ODF$INSTALLATION_PROCEDURES.CREATE_OPTICAL_VALIDATION
```

The above procedure call contains the following capability creations. If different default values are desired, use subcommand CHANGE_CAPABILITY_FIELD of MANAGE_USER_FIELDS subutility of the ADMINISTER_VALIDATIONS utility to change them after the capabilities are created.

```
CREATE_CAPABILITY_FIELD FN=OPTICAL_DISK_READ DV=INCLUDE ..
  DESCRIPTION='MAY READ OPTICAL DISK FILES'
CREATE_CAPABILITY_FIELD FN=OPTICAL_DISK_WRITE DV=INCLUDE ..
  DESCRIPTION='MAY WRITE OPTICAL DISK FILES'
CREATE_CAPABILITY_FIELD FN=OPTICAL_DISK_GLOBAL_READ DV=INCLUDE ..
  DESCRIPTION='MAY READ OPTICAL DISK FILES OF OTHER USERS'
CREATE_CAPABILITY_FIELD FN=OPTICAL_DISK_GLOBAL_WRITE DV=INCLUDE ..
  DESCRIPTION='MAY WRITE OPTICAL DISK FILES OF OTHER USERS'
CREATE_CAPABILITY_FIELD FN=OPTICAL_DISK_CONTROL DV=EXCLUDE ..
  DESCRIPTION='MAY CONTROL OPTICAL DISK WITH ODU'
```

3. See the Installation Validation and Accounting chapter in the NOS/VE Optical Storage System manual (60463926) about validation and set capabilities for the users that need to use the operator or engineering functions of OPTICAL_DISK_UTILITY (ODU).

ORACLE

ORACLE is a relational database management system developed by ORACLE Corporation. ORACLE runs on a wide variety of platforms, including Control Data systems running NOS/VE.

To complete installation of ORACLE on your system, refer to the chapter Installing the ORACLE Product in the ORACLE for NOS/VE Installation and User's Guide (60488014). You must perform the steps in the section titled Pre-Installation and then execute the INSTALL_ORACLE command described in the section titled Installation.

NOTE

You do not need to do - Installing ORACLE Step 1: Load the Distribution Tape - since this already occurred in step 16 on page 2-43

Permanent File/Queue File Transfer Facility (PTF/QTF)

The Permanent File Transfer Facility (PTF) provides for the transfer of permanent and temporary files:

- among NOS/VE, NOS, and CYBER 120 systems interconnected via CDCNET
- among NOS/VE, NOS, NOS/BE, CYBER 200, IBM, and VAX via the Loosely Coupled Network (LCN).

The Queue File Transfer Facility (QTF) provides for the transfer of input jobs or output files (queue files):

- among NOS/VE, NOS, and CYBER 120 systems interconnected via CDCNET
- among NOS/VE, NOS, NOS/BE, CYBER 200, IBM, and VAX via LCN.

Usage through LCN requires the RHFAM/VE product.

NOTE

If you are also installing the RHFAM/VE product, the instructions in this section assume that you have already performed the RHFAM/VE installation instructions beginning on page 3-75.

To use PTF/QTF:

- Each family to be accessed via PTF/QTF must have a unique family name within the network in order to perform implicit file transfers. Documentation on changing family names is in the Permanent File Maintenance chapter of the SPMM/Vol2.
- Between NOS/VE hosts connected via CDCNET, the PTF/QTF product must be installed on each host.
- Between NOS/VE and NOS hosts connected via CDCNET, the PTF/QTF product must be installed on each NOS/VE host and the NOS PTF/QTF File Transfer Facilities product must be installed on each NOS host.

- Between NOS/VE and NOS, NOS/BE, CYBER 200, IBM, VAX and other NOS/VE RHFAM/VE hosts via LCN, PTF/QTF and RHFAM/VE must be installed on all NOS/VE hosts and the applicable Control Data RHF product must be installed on the other non-NOS/VE hosts. For example, a host running NOS/VE 1.7.1 L803 must have a matching level of communication software and a host running NOS/VE 1.4.2 must have communication software at a 1.4.2 level.

  Refer to SOLVER Installation Bulletins and PSR CSFA052 for information pertaining to which releases of RHF software Control Data has verified with other releases of companion software.

- The scheduling class FILE_TRANSFER must have been created on each mainframe to be accessed via PTF. Creation of this class is described in step 14 on page 2-39.

- The PTF server executes in the FILE_TRANSFER scheduling class and users must be validated for this scheduling class in order to use PTF.

- Users must be validated to use the EXPLICIT_REMOTE_FILE reference and IMPLICIT_REMOTE_FILE reference capabilities as described in the NOS/VE User Validation manual (60464513).

Application Definition

Installation of PTF/QTF is different depending whether it is to be used through CDCNET via NAM/VE, LCN via RHFAM/VE, or both:

- To use PTF/QTF only through CDCNET, perform steps 1 through 3 shown below.

- To use PTF/QTF only through LCN, perform the instructions in the RHFAM/VE section beginning on page 3-75 of this IHB.

- To use PTF/QTF through CDCNET and LCN, perform step 1 below and all steps in the RHFAM/VE section beginning on page 3-75 of this IHB.

The installation must be performed on all hosts which are to be accessed via PTF/QTF.

1. Define the PTF/QTF application for NAM/VE by entering the following commands at the system console:

```
MANAGE_APPLICATION_DEFINITIONS
 DEFINE_PTF (titles)
 DEFINE_QTF
 DEFINE_QTFS (titles)
 QUIT
```

Replace titles with a list created according to the following items:

- To allow users on other NOS/VE systems to perform file and queue transfers by referencing only the family name (implicit transfers), include in the list the name of each family on this mainframe to be accessed by PTF/QTF.

- In an environment which also includes RHFAM/VE, include in the list the RHFAM/VE LID names for this mainframe. For consistency, the LID names and family names should match.

- The list for DEFINE_QTFS must also contain the values for the HOST_PHYSICAL_IDENTIFIER used on the ACTIVATE_QTF and ACTIVATE_QTFS commands. See step 2 in this section or step 3 in the RHFAM/VE section, whichever is appropriate.

Consult the NOS/VE Network Management manual (60463916) for documentation on these commands.

Upon completion, the system displays:

```
PTF application is defined
QTF client application defined for NAM/VE
QTF server application defined for NAM/VE
```

2. Perform the following commands at the system console to activate PTF/QTF system tasks:

```
ACTIVATE_PTF
ACTIVATE_QTF HPI='identifier'
ACTIVATE_QTFS HPI='identifier'
```

where identifier is a name for the current mainframe. Since QTF uses this identifier as the source LID for queue file transfer, the non-NOS/VE mainframes must include it as one of the LIDs for this NOS/VE mainframe in the remote non-NOS/VE PTF/QTF network configuration. This allows QTF access between NOS/VE and non-NOS/VE hosts. The system tasks associated with the PTF/QTF applications must be defined and activated at every deadstart. These same tasks are used for both NAM/VE and RHFAM/VE. To do this conveniently, place the previous commands in the $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG file.

Consult the NOS/VE Network Management manual (60463916) for documentation on these commands.

The following entries are placed in the job log:

```
---- Task started:   OSA$FILE_TRANSFER_SERVER
---- Task started:   QUEUE_TRANSFER_CLIENT
---- Task started:   QUEUE_TRANSFER_SERVER
```

3. Validate users for PTF usage.

   The PTF server executes in the FILE_TRANSFER job class and users must be validated for this job class in order to use PTF. Users must also be validated to use the EXPLICIT_REMOTE_FILE and IMPLICIT_REMOTE_FILE reference capabilities. Use the ADMINISTER_VALIDATIONS (ADMV) utility to create additional user validations. ADMV is described in the NOS/VE User Validation manual (60464513).

Remote Host Facility Access Method (RHFAM/VE)

The installation of the Remote Host Facility Access Method (RHFAM/VE) is influenced by whether or not NAM/VE is being used on the same host mainframe. When running both RHFAM/VE and NAM/VE, it is extremely important that NAM/VE be activated before RHFAM/VE at each deadstart because NAM/VE shares buffer space with RHFAM/VE. Follow the instructions below to ensure that this happens. Installation of RHFAM/VE consists of:

1. Defining the LCN Network Access Device (NAD) in the NOS/VE physical configuration. See the SPMM/Vol2 for more information.

2. Creating an RHFAM/VE configuration file. This process is documented in the NOS/VE LCN Configuration and Network Management manual (60463917).

3. Activating the RHFAM/VE application. This must be done at every deadstart. To ensure that it happens automatically, the activation command must be placed in one of two files:

   - In an environment which contains both NAM/VE and RHFAM/VE, the command should be placed in the $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG file.

   - In an RHFAM/VE only environment, place these commands in the $SYSTEM.PROLOGS_AND_EPILOGS.JOB_ACTIVATION_EPILOG file.

   The commands to define and activate RHFAM/VE are shown below:

```
ACTIVATE_RHFAM
DEFINE_PTF_FOR_RHFAM
DEFINE_QTF_FOR_RHFAM
DEFINE_QTFS_FOR_RHFAM
ACTIVATE_PTF
ACTIVATE_QTF HPI='identifier'
ACTIVATE_QTFS HPI='identifier'
```

   where identifier is a name for the current mainframe. Although not specifically used by RHFAM/VE in an LCN environment, the parameter is required. For consistency, the name specified should match the LCN physical identifier (PID) as specified on the MANAGE_RHFAM_NETWORK command DEFINE_LOCAL_HOST for this mainframe.

   Since QTF uses this identifier as the source LID for queue file transfer, non-NOS/VE mainframes must include it as one of the LIDs for this NOS/VE mainframe in the remote non-NOS/VE PTF/QTF network configuration. This allows QTF access between NOS/VE and non-NOS/VE hosts.

   These commands can be entered from the console.

The name you specify for QTF and QTFS should be the same. Consult the NOS/VE LCN Configuration and Network Management manual (60463917) and NOS/VE Network Management manual (60463916) for more information about these commands.

4. Validating users for PTF usage.

   The PTF server executes in the FILE_TRANSFER job class, so users must be validated for this job class in order to use PTF. Users must also be validated to use the EXPLICIT_REMOTE_FILE and IMPLICIT_REMOTE_FILE reference capabilities. Use the ADMINISTER_VALIDATIONS (ADMV) utility to create additional user validations as described in the NOS/VE User Validation manual (60464513).

Remote Line Monitor (RLM)

The Remote Line Monitor is full screen application which provides an online (software) line monitoring capability. This monitor is capable of monitoring all received and transmitted characters on a LIM and port that is supported by the standard CDCNET CIM Firmware and for protocols for which a remote line monitor capability has been defined (initially only Asynch and HASP have been implemented). Data can be written to a file in unformatted form and formatted later, or it can be dynamically formatted and displayed to the screen.

Remote Line Monitor consists of two pieces 1) the Remote Line Monitor utility which is a NOS/VE application, and 2) the CDCNET Remote Line Monitor TIP.

The NOS/VE application is a screen utility designed to guide the user through the various Remote Line Monitor functions.

Only one line at a time may be monitored by a Remote Line Monitor session. Note that the CDCNET Remote Line Monitor TIP has the restriction that only one line at a time may be monitored in any given DI.

NOTE

Since Remote Line Monitor is a full screen application, it must be run from a terminal and not the console.

Installation

To install Remote Line Monitor, enter the following commands:

```
MANAGE_APPLICATION_DEFINITIONS
  DEFINE_RLM
QUIT
```

Usage

Users of Remote Line Monitor must be validated for NETWORK_OPERATOR capability.

Usage of Remote Line Monitor is recorded if the usage file is made available by doing the following:

```
CREATE_FILE ..
  F=$SYSTEM.REMOTE_LINE_MONITOR.REMOTE_LINE_MONITOR_USAGE
CREATE_FILE_PERMIT ..
  F=$SYSTEM.REMOTE_LINE_MONITOR.REMOTE_LINE_MONITOR_USAGE ..
  GROUP=PUBLIC AM=APPEND
CREATE_FILE_PERMIT ..
  F=$SYSTEM.REMOTE_LINE_MONITOR.REMOTE_LINE_MONITOR_USAGE ..
  USER=administrator AM=ALL FN=family
DETACH_FILE F=$SYSTEM.REMOTE_LINE_MONITOR.REMOTE_LINE_MONITOR_USAGE
```

Replace administrator with the administrator name for RLM.

Replace family with the family name of the administrator user name.

To use the Remote Line Monitor, users should execute the following commands from a terminal:

```
CREATE_COMMAND_LIST_ENTRY ..
  E=$SYSTEM.REMOTE_LINE_MONITOR.LMF$COMMAND_LIBRARY
REMOTE_LINE_MONITOR
```

This product is discussed in the CDCNET Network Operations and Analysis manual (60461520). The DEFINE_RLM and DELETE_RLM commands are discussed in the CDCNET Configuration and Site Administration Guide (60461550).

Security

If more security is required than restricting users to those with NETWORK_OPERATOR capability, the following options should be considered:

- Create a user capability for Remote Line Monitor and change the defined application to require that capability.

```
SYSTEM_OPERATOR_UTILITY
  ADMINISTER_VALIDATIONS
    MANAGE_USER_FIELDS
      CREATE_CAPABILITY_FIELD ..
        FIELD_NAME=remote_line_monitor .. "Site chosen name"
        DEFAULT_VALUE=EXCLUDE ..
        CHANGE_AUTHORITY=SYSTEM_ADMINISTRATION ..
        MANAGE_AUTHORITY=SYSTEM_ADMINISTRATION ..
        DESCRIPTION=..
          'Capability required to use $REMOTE_LINE_MONITOR_CLIENT.'
    QUIT

    "Give individual users the required capability."
    CHANGE_USER USER=user
      CHANGE_CAPABILITY ADD=remote_line_monitor
  QUIT
QUIT
```

  Use MANAGE_NETWORK_APPLICATIONS to add the required capability to the client application definition for $REMOTE_LINE_MONITOR.

```
MANAGE_NETWORK_APPLICATIONS
  CHANGE_CLIENT CLIENT=$REMOTE_LINE_MONITOR_CLIENT
    CHANGE_CLIENT_VALIDATION CAPABILITY=remote_line_monitor
  QUIT
QUIT
```

- Manage access to the Remote Line Monitor command library with file permits.

- Use Service Access Control to limit access between networks, by restricting Remote Line Monitor titles which start with 'RLM'.

Removable Media Management System (RMS)

The RMS product is automatically installed. If you wish to tailor the site-modifiable procedures DISPLAY_AGED_VOLUMES, DISPLAY_ALL_GENERATIONS, DISPLAY_SLOT_MAP, and FORMAT_LABEL, use the CREATE_OBJECT_LIBRARY and EDIT_FILE utilities to modify the procedures. This is best performed from a terminal session.

The DISPLAY_AGED_VOLUMES procedure displays all volumes that had expired the last time the AGE_VOLUMES subcommand was executed.

The DISPLAY_ALL_GENERATIONS procedure displays information about all generations in a removable media group.

The DISPLAY_SLOT_MAP procedure displays the slot information for a specified location.

The FORMAT_LABEL procedure allows you to define the size (in lines) of the external labels to be applied to removable media volumes. The FORMAT_LABEL procedure is invoked by the MANRM subcommand CREATE_LABEL_CONNECTION to format the label information as it is generated. The FORMAT_LABEL procedure can also be used to create volume labels independent of the CREATE_LABEL_CONNECTION process. When it is used in this way, the input to the procedure is a file that contains one external VSN per line.

The released versions of these procedures reside in the file :$SYSTEM.$SYSTEM.RMS.RSF$COMMAND_LIBRARY.

Appendix C, Modifying Site-Specific Procedures, of the NOS/VE Removable Media Management System Usage manual (60463947) contains source listings and detailed information on how to modify the procedures. When you finish modifying the procedures, create the object library :$SYSTEM.$SYSTEM.RMS.SITE_COMMAND_LIBRARY for use in updating the RMS command library and for use in subsequent upgrades to RMS. Use CREATE_OBJECT_LIBRARY to combine the modules from this newly created library with the :$SYSTEM.$SYSTEM.RMS.RSF$COMMAND_LIBRARY.

If you do not modify any of the procedures, you need not create the :$SYSTEM.$SYSTEM.RMS.SITE_COMMAND_LIBRARY nor modify the installed version of the :$SYSTEM.$SYSTEM.RMS.RSF$COMMAND_LIBRARY.

For information regarding the creation and initialization of the removable media library (RML), refer to the Initialization Chapter of the NOS/VE Removable Media Management System Usage manual (60463947).

NOTE

If you are installing RMS in a clustered mainframe environment, be sure to read the appropriate section of the Initialization chapter in the NOS/VE Removable Media Management System Usage manual (60463947) before you begin

the installation process.

Transmission Control Protocol/Internet Protocol (TCP/IP)

The TCP/IP (Transmission Control Protocol/Internet Protocol) product consists of a CDCNET TIP and host programs FTP (File Transfer Protocol), INETD (Internet Daemon), LPD (Line Printer Daemon), REXEC (Remote Execution of Commands), SMTP (Simple Mail Transfer Protocol), TFTP (Trivial File Transfer Protocol), and X/Windows. The RPC/XDR (Remote Procedure Call/External Data Representation) interface and the PORTMAPPER Daemon are also included.

FTP and SMTP are TCP/IP file transfer and mail transfer applications. INETD is a TCP/IP server application that initiates TCP/IP servers. LPD is a TCP/IP application to allow multiple hosts to exchange output files and share printers. REXEC is a TCP/IP application to allow the execution of commands on a remote system. TFTP is a UDP file transfer protocol. RPC/XDR is the NOS/VE implementation of Sun Microsystems' release 4.0 of RPC/XDR. PORTMAP_DAEMON is a server that converts RPC program numbers into DARPA protocol port numbers. PORTMAP_DAEMON must be running in order to make RPC calls.

The DI software is installed automatically.

In order to use FTP, INETD, LPD, REXEC, SMTP, TFTP, the RPC/XDR interface, and X/Windows you must:

1. Ensure that the NFS and TCP_IP scheduling classes have been created. (You should have created these classes during step 14 on page 2-39.)

2. Create the INETD configuration file.

   For information on this file, consult the TCP/IP Interface Software sections of the CDCNET Configuration guide (60461550).

3. Define the names of the TCP/IP communications device applications. To do this, enter the following commands:

```
MANAGE_APPLICATION_DEFINITIONS
    DEFINE_C_SOCKET
    DEFINE_FTP
    DEFINE_FTPS
    DEFINE_IPC_APPLICATIONS
    DEFINE_LPD
    DEFINE_LPDS
    DEFINE_NAME_RESOLVER DOMAIN_NAME=domain_name ..
      NAME_SERVERS=(list_of_name_server_addresses) ..
      TCP_SOLUTION=TCP_DEVICE
```

```
DEFINE_NFS_TIME_SERVERS
DEFINE_REXEC
DEFINE_REXECS
DEFINE_SMTP
DEFINE_SMTPS
DEFINE_TFTP
DEFINE_TFTPS
QUIT
```

NOTE

For more information regarding the DEFINE_DOMAIN_NAME_RESOLVER, refer to the subsection, Define the NOS/VE Domain Name Resolver, later in this section.

Replace domain_name with the name of Internet domain in which your NOS/VE system resides. For example, if the domain name of your NOS/VE system is GRAY.CDCNET.CDC.COM, substitute CDCNET.CDC.COM for domain_name .

Replace list_of_name_server_addresses with a list of IP addresses of the Domain Name Servers which serve your Internet domain. Refer to the NOS/VE Network Management manual (60463916) for more information.

NOTE

To use the TCP/IP communications device support software, an ADD_TCPIP_ACCESS command must be added to the configuration file of each MDI and ICA supporting TCP and UDP traffic.

4. Update the CDCNET DI configuration files and create the TCP/IP hosts and services files. For information on these configuration files, consult the NOS/VE Network Management manual (60463916).

5. Define service for INETD by adding the following command to the file $SYSTEM.TCP_IP.INETD_CONFIGURATION:

```
DEFINE_SERVICE SERVICE=INETD ..
  MANTA_FILE_NAME=$SYSTEM.TCP_IP.INETD_MANTA_SERVICE_FILE
```

6. The FTP server is automatically started by the system job INTERNET_DAEMON (INETD) whenever a remote host opens a TCP/IP connection to the well known port of FTP. In order to make FTP known to INETD, the NOS/VE site administrator must add the following command to the file $SYSTEM.TCP_IP.INETD_CONFIGURATION:

```
DEFINE_SERVICE SERVICE=FTP APPLICATION_NAME=OSA$FTP_SERVER ..
  DEBUG_MODE=OFF DEBUG_MODE_INTERACTIVE=OFF ..
  INITIAL_STATE=ACTIVE ..
  PARAMETER_STRING='MDU=MG DMDU=MG' ..
  PORT=21 PROTOCOL=TCP ..
  SERVICE_TASK=$SYSTEM.TCP_IP.FTP_BOUND_PRODUCT ..
  STARTING_PROCEDURE=IPP$FTP_SERVER_TASK ..
  MANTA_FILE_NAME=$SYSTEM.TCP_IP.FTP_MANTA_SERVICE_FILE
```

The site administrator must also add the following line to the $SYSTEM.TCP_IP.SERVICES file:

```
FTP 21/TCP
```

7. The LPD server is automatically started by the system job INTERNET_DAEMON (INETD) whenever a remote host opens a TCP/IP connection to the well known port of LPD. In order to make LPD known to INETD, the NOS/VE site administrator must add the following command to the file $SYSTEM.TCP_IP.INETD_CONFIGURATION:

```
DEFINE_SERVICE SERVICE=PRINTER APPLICATION_NAME=OSA$LPD_SERVER ..
  DEBUG_MODE=OFF DEBUG_MODE_INTERACTIVE=OFF INITIAL_STATE=ACTIVE ..
  PARAMETER_STRING= ..
  'DJC=''$SYSTEM.TCP_IP.LPD.DISPLAY_UNIX_OUTPUT_STATUS'' '//..
  'QJC=''$SYSTEM.TCP_IP.LPD.PRINT_UNIX_FILE'' '//..
  'VPC=''$SYSTEM.TCP_IP.LPD.VALIDATE_PRINTER''' ..
  PORT=515 PROTOCOL=TCP ..
  SERVICE_TASK=$SYSTEM.TCP_IP.LPD.BOUND_PRODUCT ..
  STARTING_PROCEDURE=LPP$ACCEPT_LPD_CONNECTION
```

The site administrator must also add the following line to the $SYSTEM.TCP_IP.SERVICES file:

```
PRINTER 515/TCP
```

8. The REXEC server is automatically started by the system job INTERNET_DAEMON (INETD) whenever a remote host opens a TCP/IP connection to the well known port of REXEC. In order to make REXEC known to INETD, the NOS/VE site administrator must add the following command to the file $SYSTEM.TCP_IP.INETD_CONFIGURATION:

```
DEFINE_SERVICE SERVICE=REXEC APPLICATION_NAME=OSA$REXEC_SERVER ..
  DEBUG_MODE=OFF DEBUG_MODE_INTERACTIVE=OFF INITIAL_STATE=ACTIVE ..
  PORT=512 PROTOCOL=TCP ..
  SERVICE_TASK=$SYSTEM.TCP_IP.REXEC_BOUND_PRODUCT ..
  STARTING_PROCEDURE=RXP$ACCEPT_INITIAL_CONNECTION ..
  PARAMETER_STRING='JC=job_class'
```

   Replace job_class with the job class you want REXEC jobs to be run under. The PARAMETER_STRING parameter is not necessary if you want your jobs to run under the BATCH job class. This is the default job class. If you desire to change the job class for REXEC jobs, all REXEC users must be validated for the job class specified in the above command.

   The site administrator must also add the following line to the $SYSTEM.TCP_IP.SERVICES file:

```
REXEC 512/TCP
```

9. The SMTP server is automatically started by the system job INTERNET_DAEMON (INETD) whenever a remote host opens a TCP/IP connection to the well known port of SMTP. In order to make SMTP known to INETD, the NOS/VE site administrator must add the following command to the file $SYSTEM.TCP_IP.INETD_CONFIGURATION:

```
DEFINE_SERVICE SERVICE=SMTP APPLICATION_NAME=OSA$SMTP_SERVER ..
  DEBUG_MODE=OFF DEBUG_MODE_INTERACTIVE=OFF ..
  INITIAL_STATE=ACTIVE ..
  PARAMETER_STRING='MDU=MG DMDU=MG' ..
  PORT=25 PROTOCOL=TCP ..
  SERVICE_TASK=$SYSTEM.TCP_IP.SMTP_BOUND_PRODUCT ..
  STARTING_PROCEDURE=IPP$CREATE_SMTP_RECV_CONNECTION
```

10. The TFTP server is automatically started by the system job INTERNET_DAEMON (INETD) whenever a remote host opens a TCP/IP connection to the well known port of TFTP. In order to make TFTP known to INETD, the NOS/VE site administrator must add the following command to the file $SYSTEM.TCP_IP.INETD_CONFIGURATION:

```
DEFINE_SERVICE SERVICE=TFTP APPLICATION_NAME=OSA$TFTP_SERVER ..
  DEBUG_MODE=OFF DEBUG_MODE_INTERACTIVE=OFF INITIAL_STATE=ACTIVE ..
  PORT=69 PROTOCOL=UDP ..
  SERVICE_TASK=$SYSTEM.TCP_IP.TFTP_BOUND_PRODUCT ..
  STARTING_PROCEDURE=TPP$TFTP_SERVER
```

The site administrator must also add the following line to the $SYSTEM.TCP_IP.SERVICES file:

```
TFTP 69/UDP
```

After you have completed the previous steps, perform the following steps from the system console:

1. Activate the Internet Daemon (INETD) application, and the SMTP client:

```
ACTIVATE_INETD
ACTIVATE_SMTP
```

If you wish to use RPC/XDR and have NOT ordered NFS, you should also activate the Portmapper Daemon by entering the following command:

```
ACTIVATE_PORTMAP
```

2. The FTP, REXEC, LPD, SMTP, and TFTP servers are activated automatically via INETD.

The ACTIVATE_INETD, ACTIVATE_PORTMAP, and ACTIVATE_SMTP commands should also be placed in the $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG file for automatic activation across deadstarts. Replace the ACTIVATE_PORTMAP command with ACTIVATE_IPC_APPLICATIONS if NFS is to be run.

Consult the NOS/VE Network Management manual (60463916) for documentation on the ACTIVATE commands.

Define the NOS/VE Domain Name Resolver

The NOS/VE Domain Name Resolver allows TCP/IP applications on NOS/VE to communicate with distributed Domain Name Servers in order to obtain information about other hosts in the TCP/IP network. In particular, when the Domain Name Resolver is defined, NOS/VE applications will call it in order to find the IP addresses associated with host names. NOS/VE applications will no longer consult the file $SYSTEM.TCP_IP.HOSTS for this type of information after the Domain Name Resolver is defined.

To define and activate the Domain Name Resolver, execute the following commands from the NOS/VE console:

```
MANAGE_APPLICATION_DEFINITIONS
  DEFINE_NAME_RESOLVER domain_name (list_of_name_server_addresses)
  QUIT
```

Replace domain_name with the name of Internet domain in which your NOS/VE system resides. For example, if the domain name of your NOS/VE system is GRAY.CDCNET.CDC.COM, substitute CDCNET.CDC.COM for domain_name .

Replace list_of_name_server_addresses with a list of IP addresses of the Domain Name Servers which serve your Internet domain. For example, if you have installed Domain Name Servers on two Unix workstations within your organization, and the IP addresses of those workstations are 129.179.52.17 and 129.179.48.23, then substitute

```
(129.179.52.17 129.179.48.23) for (list_of_name_server_addresses)
```

Given the information above, the Domain Name Resolver for NOS/VE host GRAY would be defined and activated with the following sequence of commands:

```
MANAGE_APPLICATION_DEFINITIONS
  DEFINE_NAME_RESOLVER CDCNET.CDC.COM (129.179.52.17 129.179.48.23)
  QUIT
```

The DEFINE_NAME_RESOLVER command creates a file named $SYSTEM.TCP_IP.RESOLVER_CONFIGURATION

Given the information above, the file will contain the following three lines:

```
domain CDCNET.CDC.COM
nameserver 129.179.52.17
nameserver 129.179.48.23
```

Thus, the order in which the Domain Name Servers addresses are specified is significant. The order of specification defines the order in which Domain Name Servers are queried for information. The Domain Name Resolver queries the first Domain Name Server. If it does not respond in a timely fashion, the Resolver tries the second Server. If the second Server does not respond in a timely fashion, the Resolver tries the third Server, and so on.

To deactivate the Domain Name Resolver, simply rename or delete its configuration file, $SYSTEM.TCP_IP.RESOLVER_CONFIGURATION. The presence or absence of this file determines whether the Resolver is used to discover host information or $SYSTEM.TCP_IP.HOSTS is searched for information.

The name of the local NOS/VE host is the host name specified on the DEFINE_TCPIP_HOST command in the file $SYSTEM.NETWORK.CONFIGURATION. The host name must be a fully qualified INTERNET domain name.

The Domain Name Resolver requires that the UDP protocol software be defined in your MDI or ICA. To define the UDP protocol software, you must add the following command to the configuration file for the MDI or ICA:

```
DEFINE_UDP_INTERFACE
```

VX/VE

VX/VE is the NOS/VE layered implementation of UNIX. There are three varieties, each supporting a different number of users. In the installation procedure below, you must supply the subproduct name of the variety you are going to install. The possible varieties are:

- VX_UNLIMITED_USER
- VX_32_USER
- VX_64_USER

Only one variety is included with your order. You can determine which one by examining the output of the DISPLAY_INSTALLED_SOFTWARE subcommand of the INSTALL_SOFTWARE utility. The display shows the following message below the subproduct name for your particular variety.

```
(Currently not installed)
```

VX/VE Installation

NOTE

The following names cannot be used as a NOS/VE family name if you are using C/VE or VX/VE:

BIN, DEV, ETC, FRL, INSTALL, IPC, LIB, MAINTENANCE, TMP, USR, VX.

VX and C first check the file name /xxx to determine if it is a valid family name. If it is not, VX and C assume it exists in the root directory.

Perform the following tasks to install VX/VE:

1. Before installing VX/VE, you must select a NOS/VE user name to be the VX/VE administrator. If this user name is not yet defined, define it at this time. If you define a new user name, you must log into and out of the user name before continuing with the following tasks. This user's home catalog must reside on a set that supports class P files.

2. Execute the following command from the system console:

```
$SYSTEM.VX.INSTALL.LOAD PL=packing_list VAFN=family VAUN=user ..
  SP=variety
```

Replace packing_list with the packing list parameter you entered on the SET_INSTALLATION_TAPE system core command in step 3 on page 2-11. (If VX/VE is being installed via the component order installation process (see chapter 9), the packing list parameter is the value you entered on the LOAD_PACKING_LIST subcommand described on page 9-1.)

Replace family and user with the family and user name of the VX/VE administrator, and variety with the appropriate variety of VX/VE.

The question: "Is this system licensed for VX/VE?" appears. A response beginning with Y or y causes a batch job to begin which uses INSTALL_SOFTWARE to load the necessary permanent files for VX/VE in the $SYSTEM.VX catalog. The VX/VE administrator is given READ, WRITE, EXECUTE, CYCLE and CONTROL permission on this catalog. You can monitor the batch job via the VED IJD display. When the LOAD_VX installation job disappears from the VED IJD display, the batch job is complete.

3. Wait for the installation batch job to complete.

   This may take from a few minutes to more than an hour depending upon processor type, disk configuration, and system workload.

Validation of VX/VE Users

1. Log into the VX/VE administrator's user name and execute the following command after the batch job completes:

   ```
   VX
   ```

2. Users may be added to the /etc/passwd file with the ed editor as follows:

   ```
   ed /etc/passwd
   a
   user::uid:gid:name:/family/user:
   .
   w
   q
   ```

   where

user	is the NOS/VE user name of the user being validated.
uid	is a unique user identifier between 1 and 60000.
gid	is an arbitrary group identifier between 1 and 60000.
name	is the name of the user (as in John Doe).
family	is the name of the family of the user.
/family/user	is the full VX pathname to the user's VX home ($HOME) directory.

NOTE

Enter *EOI or exit to exit the VX/VE environment.

X/Windows Version 4.1

X/Windows Version 4.1 is released with NOS/VE 1.7.1 L803. This version contains the libraries required to build applications under the X Window System* and OSF/Motif** graphical user interface. It also contains some X and OSF/Motif clients. X/Windows Version 4.1 requires the C Version 2 product. The tasks below are used to complete the installation of X/Windows. These tasks assume that X/Windows Version 1.0 has not been installed at the site. If X/Windows Version 1.0 or X/Windows 4.0 is installed, refer to the section in Chapter 8 regarding an upgrade installation for X/Windows.

C-Socket Client

X/Windows 4.1 uses the C-Socket client name for TCP/IP communications. This client must be defined in order for X and OSF/Motif client applications to function. To install this client, enter the following under the MANAGE_APPLICATION_DEFINITIONS utility:

```
DEFINE_C_SOCKET
```

If the C-Socket client is already defined, an informative error message will be issued.

See the NOS/VE Network Management manual, (publication number 60463916) for more information about installing network applications.

* X Window System is a trademark of the Massachusetts Institute of Technology. Copyright 1989 by the Massachusetts Institute of Technology. Permission to use, copy, modify, distribute, and sell this software and its documentation for any purpose is hereby granted without fee, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of M.I.T. not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. M.I.T. makes no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty. This software is not subject to any license of the American Telephone and Telegraph Company or of the Regents of the University of California.

** OSF/Motif is a trademark of the Open Software Foundation, Inc.

X.400 Transfer Facility (XTF)

The X.400 Transfer Facility (XTF) is Control Data's implementation of the X.400 Reliable Transfer Service (RTS). It is used for transferring mail between NOS/VE and non-NOS/VE X.400 systems.

The tasks below are used to complete the installation of XTF. Refer to the Installation and Configuration chapter of the Mail/VE Version 2 Administration manual (60464515) for additional information and examples that may be beneficial in understanding the interrelationships of command parameters.

1. To support X.400 transfer using XTF, there must be a path through CDCNET that supports the OSI protocol stack. That is, the OSI protocol stack must be supported on each DI that is used on that path from XTF to the foreign system. Refer to the CDCNET Configuration guide (60461550) for information on how to define a path through CDCNET that supports the OSI protocol stack.

2. To define the XTF configuration file, do the following at the console (Please note that you may already have the file $SYSTEM.MAILVE_V2.MAINTENANCE.COMMAND_LIBRARY in your command list if you started the installation process for Mail/VE Version 2.)

```
CREATE_COMMAND_LIST_ENTRY ..
  E=$SYSTEM.MAILVE_V2.MAINTENANCE.COMMAND_LIBRARY
INSTALL_X400_TRANSFER_FACILITY ..
  MESSAGE_TRANSFER_AGENT='mta_name' ..
  PASSWORD='password_string'
```

   Replace mta_name with the name assigned to Mail/VE on this host. This must match exactly the MTA name specified on the INSTALL_MAIL command.

   Replace password_string with the password to be associated with this transfer facility. This password and the above MTA name are sent when establishing an association with a remote MTA. Therefore, the values expected by the remote MTA must be set to match this password and the above MTA name.

   You must enter the INSTALL_X400_TRANSFER_FACILITY command prior to configuring Mail/VE Version 2 with routes and organizations. Refer to the Mail/VE Version 2 Administration manual (60464515) for more information about configuring Mail/VE Version 2.

3. You must complete Mail/VE Version 2 configuration with routes and organizations. Refer to the Mail/VE Version 2 Administration manual (60464515) for more information about configuring Mail/VE Version 2.

4. To activate XTF, enter the following command at the system console:

```
ACTIVATE_XTF JC=job_class
```

Replace job_class with the name of the job class you wish to use for XTF. The default value is the default batch job class of your system and need only be changed if your default batch job class has low priority. Control Data recommends that the job class priority be greater than Batch up to Interactive priority.

Normally, you should not need to specify any other parameters for the ACTIVATE_XTF command. The default values may be appropriate for your site. Refer to the NOS/VE Network Managment manual (60463916) for a list of parameters for this command. This command should also be placed in the $SYSTEM.PROLOGS_AND_EPILOGS.NETWORK_ACTIVATION_EPILOG file for automatic activation across deadstarts.